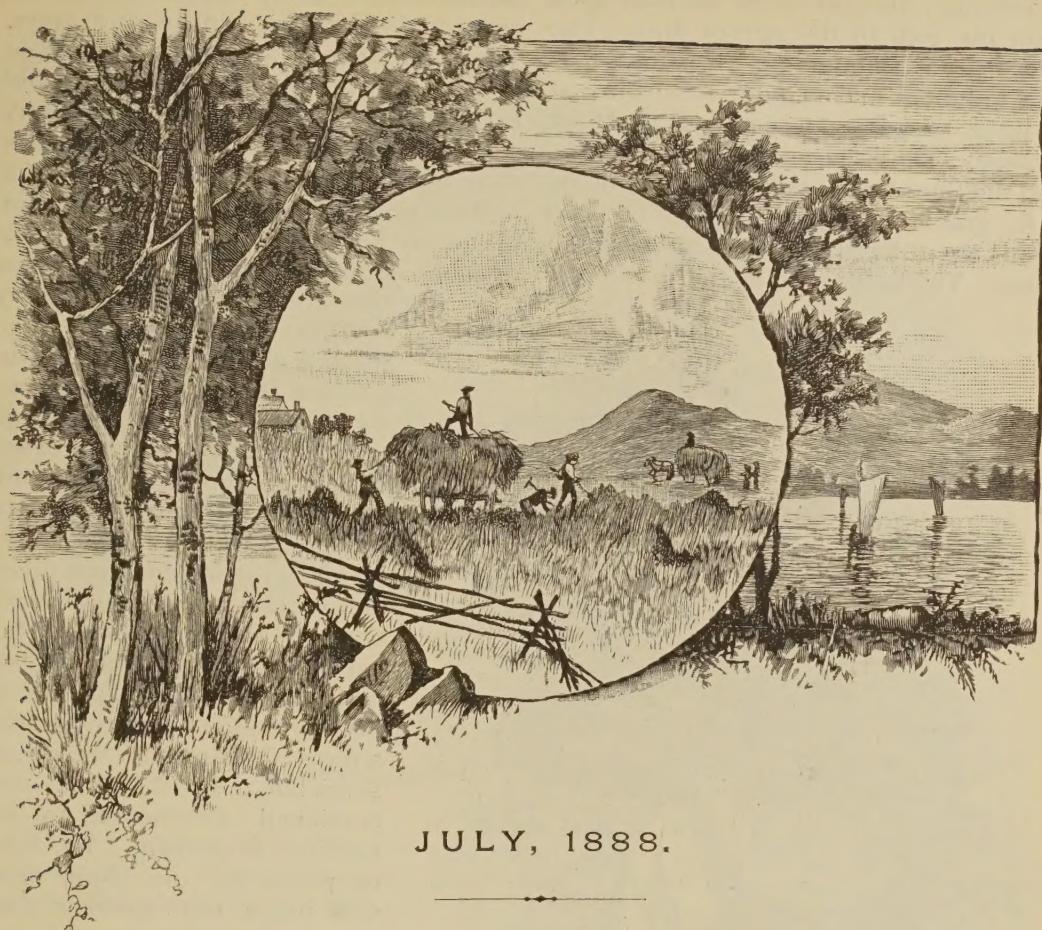


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DOUANTHUS NARCISSUS



JULY, 1888.

THE HARDY flowering plants of the springtime are among the richest endowments of our gardens. Crocus and Snowdrop, Tulip and Hyacinth, Jonquil and Narcissus quickly push their leaves through the soil after it is once unlocked from the frost, and their blooms brighten the borders and beds for a few weeks before much other new verdure or flowers appear. The season, this year, is late, and now, the first of June, only the Late Show varieties and the Parrot Tulips and some varieties of the Narcissus still remain, though they, too, will soon be gone. *Narcissus poeticus*, and its varieties, appear to last longer than most of the others. The different varieties of Iris are beginning to appear; these will continue at least until the middle of the month. Lily of the Valley, *Dicentra*, *Dodecatheon Meadia*, *Paeonia tenuifolia*, the earliest of the *Paeonies*, the Columbines and some others are now in the height of their bloom. For a month yet the herbaceous perennials will be plentiful, and some of them will be showing

their beauties during all the bright season, for not until the frosts of autumn destroy vegetation do they wholly disappear. The great variety of these plants and the showy character of their flowers make them a rich source from which to draw our garden treasures. The Magnolias are nearly out of bloom, *M. Lenne* being the latest and lengthening out the Magnolia season for nearly or quite a month. *Cornus mascula* was the first to show bloom; as soon as the ground was free from frost its branches were wreathed in masses of little yellow blossoms, like rays of golden sunshine. Then came the Forsythia, with its beautiful golden bells. Fortune's Forsythia appears to be quite hardy, while *F. viridissima* sometimes gets the ends of its branches shortened by the frost. Some of the Spiræas are now in bloom and more are to follow. *Amelanchier alpina*, a shrub with handsome, dark, glossy foliage and pretty white flowers, is now in bloom, but *Amelanchier Canadensis*, our native species, is already gone. *Prunus triloba* and the

Flowering Almond were at their best from the 10th to the 25th of May. The new shrub, *Rhodotypos Kerrioides*, is now in bloom and is quite handsome, at a little distance resembling a Mock Orange. The Lilacs are in their glory, and the Snowball is beginning to whiten.

A grand succession of herbaceous plants are at hand to follow for weeks to come. The latter part of the month the

supply of the hardy herbaceous perennials and flowering shrubs and trees. The importance of arranging gardens in the manner indicated for the spring and early summer effect is not sufficiently well understood. The bloom of our gardens is altogether too meager. From the middle to the last of summer well kept places are pleasingly bright, but from the opening of spring until the Roses come they are, for the most part, too somber — far more so than there is any necessity for. Our gardens should be reconstructed by supplying them with a greater number and greater variety of flowering shrubs and perennials. For the most part the latter will thrive with the shrubs, growing between them and occupying no more room than the shrubs alone. The expense of planting shrubs and hardy perennials when once provided for is ended for a term of years, and their cost bears but a small ratio to the continued satisfaction to be obtained from them. The cost of producing the bloom that will make our gardens gay from early spring to midsummer is much less than that for the later effect. We desire that our readers shall consider this subject seriously, for there is not one garden in fifty what it should be in respect to this subject of which we write. There are many places where no gardener is kept, a man for a day or two in a week keeping the lawn cut and the place tidied up; the same person with but little more care could give all the necessary attention to a hardy flower garden.

Again, many families leave their places for the most of the summer, or from the first of July to the middle of September, and therefore, for this reason they should make the most they can of them in spring and early summer. The hardy shrubs and herbaceous plants offer a variety and wealth of bloom at the least expense, and they range over so wide an extent of the vegetable kingdom as to give them a high educational value.

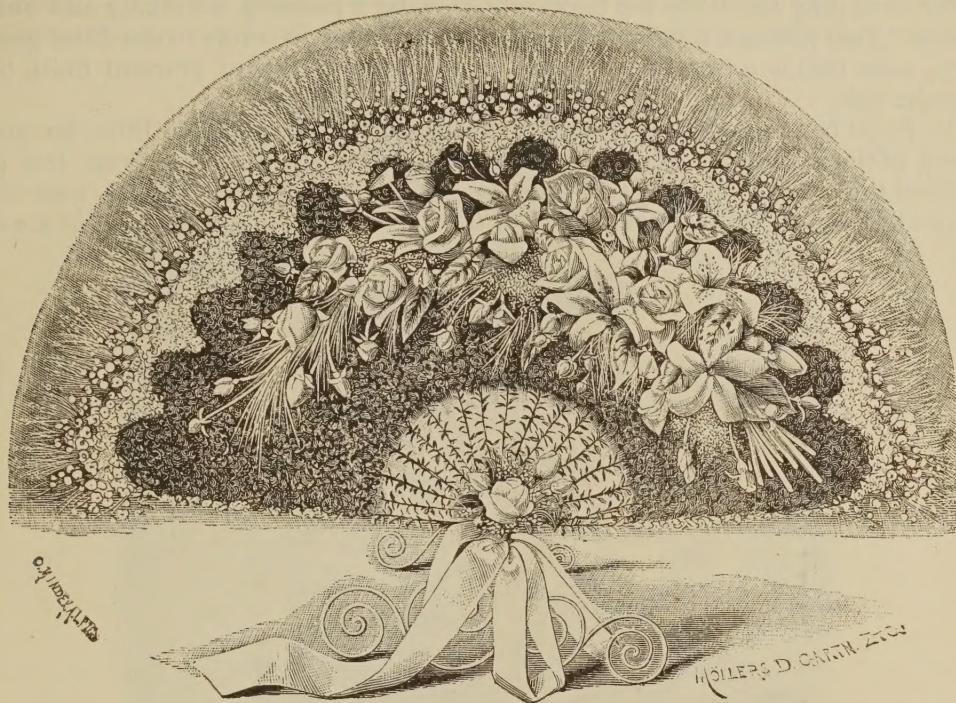


FLORAL EASEL.

Roses will be in full force. On account of the cool weather bedding out has scarcely yet commenced, and weeks must ensue before either bloom or foliage effect from them amounts to much. Annuals from seed are only beginning to make their appearance, and though when far enough advanced they will give plenty of bloom, yet they are practically out of the race until about mid-summer. To make the most of our gardens, then, in this climate, we must have a generous

FLORAL DESIGNS.

At the Horticultural Exhibition held at Hamburg, Germany, last fall, were exhibited some fine specimens of floral work which were illustrated and published by the



Gärtner's Zeitung, of Erfurt, Prussia, and on account of their excellence are here reproduced. These pieces are the work of different persons, and show the easy style of arrangement in vogue with the best German florists.



The floral easel attracted especial attention. The frame-work was formed from
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Willow rods. The ground work of the design consisted of pink Scabiosa bordered by a dark brown variety of the same flower. A beautiful garland of dark red Roses handsomely interwoven with buds and Mahonia leaves was gracefully laid over the center, drooping almost to the floor, and showing a pleasing simplicity and unity of design. Two ribbons, pink and brown, corresponding in colors to the floral ground-work, were tied in a tasteful bow and formed an elegant and graceful finish to the opposite side.

The floral fan was another attractive object. At its base was a little bouquet of Roses, of the variety La France, set off with a few sprigs of Fern. From this point radiated thin, polished brass rods, each wreathed with Myrtle. These rods disappeared in the connecting background of dark Scabiosa, upon which rested a wreath



PINK FLOWERED BASKET.

composed of La France Roses and Rose buds, *Lilium auratum* and grasses. The field was completed by a border of white Scabiosa edged by clusters of *Clethra arborea*, and outside of all was a fringe of *Isolepis* forming a lace-like margin. The baskets offer no new designs, but the manner in which the two specimens here represented were filled is worthy of mention.

The white-flowered basket consisted of flowers of *Eucharis*, *Stephanotis*, *Tuberose*, white *Lapagerias* and Roses, interspersed with sprays of *Adiantum* and *Cissus discolor*, all gracefully and lightly arranged. Two pale blue ribbons decorated the handles, forming a striking contrast to the white and green of the basket.

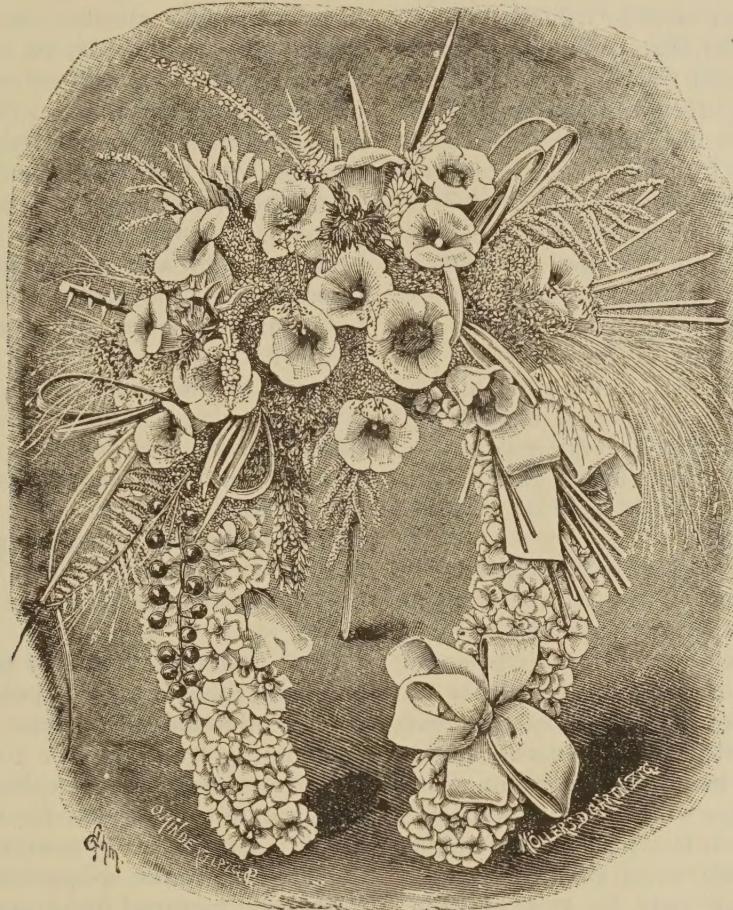
The other basket was filled with delicate Tea Roses and clusters of *Begonias* which formed a charming pink ground, over which was spread the tender sprays of *Adiantum gracillimum*, giving a soft golden hue. The handle was trimmed with the same material, and to which was added a few flowers of *Oncidium*.

The horseshoe was a very beautiful piece, and had as a groundwork of light blue flowers of *Stock*; upon this and over the arch were placed flowers of *Gloxinia* in carefully selected blue shades, surrounded and interspersed with grasses, Ferns, *Spiraea* blooms. Two bows of heliotrope-colored ribbons completed the design.

The unity of design which is apparent in the conception of each of these pieces,

with fidelity and grace of execution, is the secret of their beauty, and herein they afford an instructive lesson to florists.

Notice should be taken of the use made of Scabiosa, in different varieties, in two of the pieces. For close ground work it is evidently well adapted and produces an excellent effect; the fact that it can be had in white and in dark colors makes it



FLORAL HORSESHOE.

especially valuable. In the easel piece the pink variety harmonizes perfectly with La France Roses, while the dark border of the same flower afforded the needed contrast, but probably a richer effect and higher contrast was produced by the use of the brown and white varieties of Scabiosa with La France Roses in the fan piece.

The Horseshoe was evidently a very rich piece, and, in fact, all of them are worthy of study by skillful florists.

POLYANTHUS NARCISSUS.

Among the spring blooming bulbs there is none more pleasing than the Narcissus, and the Polyanthus varieties are especially beautiful and fragrant. The specimens figured in the colored plate of this number are Newton and Grand Monarque, Newton being yellow with a deep orange cup, and Grand Monarque white with yellow cup, each of these is a type of a class of varieties that bear great resemblance to each other, the principal difference being in size of flower or flower spike and shades of color. Grand Monarque is associated with such other desirable varieties as White Grand Primo, Bazelman major, Gloriosum, &c., and Newton with Grand Soliel d'Or. For their appearance in the garden, as pot plants, and for cut flowers they are equally desirable. There is no flower of sweeter or more agreeable fragrance.

FLAVOR AND QUALITY IN FRUITS.

It is often mentioned as a strange and objectionable fact that all the great market fruits are of a low grade, as regards quality. Sometimes the criticism is made that the popular taste in fruits is low and uneducated, and that only people of refined natures and training are capable of understanding or appreciating real excellence. It is also said that the great majority judge fruit by the eye alone, and that a showy fruit of poor quality will far outsell the best of its kind, if the latter has an unattractive exterior. In proof of all these hard sayings the large sale of Apples, like Ben Davis, of Grapes, like the Concord, and of Strawberries, like the Wilson, is cited; and it is alleged that the people in general cannot perceive the difference, so very apparent to some, between these fruits and the varieties of each which are of a much higher quality.

With a long and varied experience in different sections of the Union as a fruit grower, and a good acquaintance with the market, I am unable wholly to assent to this view of the subject. It is too much forgotten that choice quality must always be hardly so high as a secondary consideration in a class of commodities the very essence of which, at the best, is perishability. It is a provision of nature that fruits of all sorts shall be quickly perishable; for only by this perishing does the new plant come into existence. It is a well known fact that a considerable number of the finest fruits of the tropics do not enter into commerce at all, at least, in a fresh state, because of their brief existence after reaching maturity. And even with the commercial fruits most widely known, the greater part of them have to be gathered and sold in a more or less immature state, or not at all.

This early gathering is not always incompatible with future excellence. All our winter Apples, for instance, and nearly every Pear on the list, come to their highest and best flavor after being some time gathered. Some early Apples will also mature without injury, and a few with benefit, if plucked before reaching the best edible state. Other must ripen fully on the tree, and refuse to gain in quality if gathered even a week too

soon. Grapes vary also, and some bear premature gathering much better than others. Orange growers assure me that this fruit must always mature on the tree before its full merits can be known. Strawberries can hardly be said to ripen any, although they will color, after being plucked from the plant. The same can be said of most, if not all, Peaches. Some Grapes will bear early picking better than others, and some far excel others as keepers. Among these are some of the best in quality, and others quite inferior. Cherries must be pretty ripe to be good, but many varieties color and become somewhat soft long before they are ripe or really edible, and they do not improve after gathering. Many Plums keep some time, and of these a few mellow and sweeten with keeping, while others will rot without amelioration. Raspberries and Blackberries must be gathered for market as soon as colored, and do not improve as they would have done on the plant.

Now, under this state of facts, it must be evident that the great public, which is compelled to buy all the fruit it consumes, have but a small chance to cultivate a taste for the highest excellence in fruit, and are not to blame for that. There are, it is true, in every town of much size, dealers who make a specialty of choice, fresh, fully matured fruits, grown near by, and brought in, sold and consumed on the day when nearest perfection. But the circumstances necessarily attending this trade are such that the price of this choice fruit must always limit its consumption with the general public, and in fact, few but the very rich buy it, except, it may be, as a gift to sick friends, or for special occasions.

One of the peculiar inducements for one to become a fruit-grower is the possibility of having for one's self and friends a free supply of choice, well ripened fruit, of all sorts growable in a single locality. The path of the fruit-grower who aims at perfection is not easy. He has to fight his way against many obstacles, and without great patience and perseverance his success will never equal his hopes. Even the high prices realized for the finest fruit do not make the growing of it more profitable than the produc-

tion of lower grades for the general public; while the special skill and other qualities required for success in the business, offer inducements only to the true fruit lover, who often, after producing some superb specimen, can only persuade himself, in his fervent admiration, to taste it, by the knowledge that to-morrow it will be too late.

As to the consumption of fruits of a low grade by the people of our great towns, I feel sure that it is their poverty, and the absolute scarcity even at high rates, which constrains them rather than a lack of appreciation. Taste is a sense, and the fondness for fine fruit, even

though it has an æsthetic and perhaps a moral side, is essentially sensual. High culture is, therefore, not necessary to the appreciation of fine fruit. The provoking fact that even the street gamin, if he gets into your garden, will select the best of all he can find, goes far to confute the doctrine that poor people eat poor fruit from choice. If this be not so, then their temptations to felonious appropriation is very great, and perhaps, to that extent, more excusable. Nevertheless, I think I shall never live to be good enough in this world to fellowship the habitual "hooker" of my best fruit.

T. H. HOSKINS, M. D., *Newport, Vt.*

THE GLOXINIA.

There are, perhaps, few plants so easily grown and possessing such rare qualities as that tropical gem, the Gloxinia, and yet, ten years ago it was seldom seen outside the greenhouse. When classed among the "stove plants," it was the object of the professional gardener's care. Now its beautiful bells swing in the windows of many a cottage, the delight of its inhabitants and the admiration of the passer-by.

The flower of the Gloxinia is very showy without being in the least subject to the imputation of vulgarity. Its gorgeous blossoms drooping with their own weight, those of delicate tints looking as if modelled from wax, but glittering with a frosty light such as wax could never represent, and the darker varieties appearing as though formed from velvet of the richest hues, are a sight which no genuine lover of flowers can behold without enthusiasm, and which awakens interest and admiration in those to whom flowers are usually of little account.

It is strange that the adaptability of this lovely exotic to window or conservatory culture was not sooner known when one considers the ease with which it can be cultivated, it being one of the simplest of all flowers in its requirements, independent even of the sunshine which ordinary plants demand, if expected to bloom.

The Gloxinia is readily propagated both by cuttings and seeds. The former method is, perhaps, best for amateurs, as the seeds are rather fine, requiring a little

care in sowing and during the germinating period. Still, the process of raising the plants in this way is not so difficult or complicated that it need deter any one from making the attempt. I have even known the Gloxinia to grow finely from self-sown seeds scattered on the earth in the same pot with the parent plant, or in other jars standing near by. For increasing the stock of any particular variety cuttings are, of course, the most reliable, although, judging from my own experience, seeds from plants fertilized with their own pollen are pretty apt to come true. Owing to the peculiar arrangement of the essential organs in the flower, it rarely bears seed unless fertilized by hand. Cuttings from the Gloxinia should be made during the hot weather if the plants are in the conservatory or living room, as later in the season they have a tendency to decay, doubtless from a want of a proper degree of heat. Cuttings can be made in the greenhouse at any time with a prospect of success, and by treating the leaves as the florist does those of the Begonia Rex, a large stock of bulbs may be secured from the veins. It is well, however, for the amateur to confine experiments to the entire leaf or shoots, the latter, if taken from the bulb when about two or three inches in length is almost certain to strike root under favorable conditions of soil and temperature, if not kept too wet. The Gloxinia is positive on one point, it will not endure much water, except when in a thrifty, growing condition,

and even then care must be taken to have the pots thoroughly drained. To increase the number of plants of any desirable variety or varieties, leaves of the same may be placed around the edge of a six or seven-inch pot filled with sandy soil. The leaves should be cut with a stem of sufficient length to retain them in position when inserted in the earth, which must be pressed firmly around them and well watered, after which water should be used with care. If the leaves, after a few days, brighten up, looking green and fresh, continuing in this condition for a month or two, it is safe to conclude that bulbs are forming on the stems, which will make flowering plants for the following season. If, after three or four months, the green leaves dry up and look dead, and no shoot makes its appearance, don't lose all faith in raising Gloxinias from the leaf, and throw the contents of the jar, dead foliage and all, out of doors, for the chances are that down at the base of those dead leaves are good, thrifty bulbs in a dormant condition, only waiting the proper time for starting into growth. I have a dark suspicion that many disappointed individuals have thrown their hopes and bulbs away in just this manner.

One thing which the person who attempts the culture of the Gloxinia will do well to bear in mind, is, that if, at any time in the late summer or autumn, his plants die down to the ground, it is no sign that they are really dead, unless he has been trying a little too much hydro-pathic treatment, in which case he will doubtless find his worst fears realized. The Gloxinia will dispose of quite an amount of water when in bloom, but stagnant water and mud are as dangerous to it as to the human family.

Plants grown from the seed, unless in the kindly atmosphere of the green-

house, do not flower the first year, except under very favorable circumstances, and seed sown in April or May will make strong plants by winter, if well cared for. If they do not show signs of drying off they may be grown on until mid-winter before giving them their rest by withholding water gradually and allowing the tops to dry off. When dormant they should never be put in a cold, damp cellar or any place where there is even a suspicion of frost. Perhaps the safest method of procedure for the amateur is to leave the bulbs in the jars in which they have grown until they show signs of life in the spring, when water may be applied sparingly and the plant started into growth once more. After the leaves are well out the bulb may be taken from the pot, the old earth shaken well out of its roots and replanted in a compost such as is usually recommended for house plants, in the MAGAZINE.

The Gloxinia has not only its great beauty of flower and foliage to commend it to popular favor, but its blossoms share in common with that other charming house plant, the Cyclamen, the additional merit of durability, often lasting from one to two weeks before falling.

I may be partial to this flower, and therefore unjust to others, but taking into consideration its wonderful beauty, its endless variety of shades and markings, and diversity in form of flower and foliage, together with its sweet, if faint, perfume, and the ease with which it can be grown, it seems to me to be pre-eminently the plant for the window and conservatory in summer, when the Geranium and many, if not most other, plants which have brightened the winter are out in the garden or rusticating in some sheltered spot to gather strength for the coming season.

MRS. LUNEY, *Hoosac, N. Y.*

CARNATIONS.

Is there anything in the world lovelier than a double white Carnation, full and fringed and spicily sweet! I have never found it, and yet, except in large collections, or florists' windows, this plant is not often seen. If its independent habits were more widely known, I think it would be much better appreciated by

those who are unable to spend a large amount of time and money upon tender plants.

In the South, only those who are abundantly blessed with this world's treasure build conservatories, the majority contenting themselves with window gardens or pits, and not every flower will

flourish in their rather too damp atmosphere.

But the Carnation is one of those having the happy faculty of adapting itself to all circumstances, and, last winter, a large white Carnation, Peter Henderson, stood by me gallantly, sending out numbers of its waxy, pale green leaf lances to challenge the cold, and celebrating its own victories with numbers of full, exquisite blossoms.

I was in trouble, and consequently neglected my plants, a wrong which most of them resented, but never my good Peter, who almost always held out a new blossom toward me in loving greeting and gratitude for the drink which I gave him. This beautiful flower is my ideal of what a perfect blossom should be, though I would not be unjust to the colored race.

Buttercup, since it made its *début*, has been enormously popular. In color, somewhat similar to a Marechal Niel Rose, it has almost equalled it in sale as a cut flower. The few carmine streaks which will cling to it, being almost its only blemish. It is a strong, vigorous

grower, with a calyx which does not burst, and its blooms are very large. The passion for yellow flowers of every species seems to increase instead of abating.

Century is also a great favorite. It claims to be ever-blooming, a fact which I have not yet proved. Its fragrance is delicious and delicate, its calyx perfect, and its color a deep, glowing carmine.

From the long list of ever-blooming Carnations you may select any color and shade, from the deepest to the most delicate, and surely beautiful colors can be presented in no more pleasing way than when linked with the Carnation's piquant odor and contrasted with its pale green leaves. It requires some care to train Carnations to a good shape. The best plan when grown in pots is to drive a slender stake in the center for support, pinch out the tops of tall, sprawling stalks, and encourage new shoots from the root. I plant mine in nothing but leaf-mold and sand, and drench them once a week with liquid manure. Soot is also good for them, and they love heat and sunlight.

KATE ELLOCOTT.

THE GLADIOLUS.

This is one the of richest of our summer flowering bulbs. Tall, shapely, many-hued, if planted in lines of colors, fringed with edges of different colorings, in beds or groups on lawn or in garden, the flowers challenge our warmest admiration. In great diversity of color they range from pure white to dazzling scarlet. So easy of cultivation, causing neither care nor trouble, yet unsurpassed, for none are more brilliantly beautiful or make a more gorgeous display when in bloom. No garden should be without them, for they insure the utmost satisfaction. Often attaining a height of two feet, many varieties will bear two or three or even more stems of bloom. Planted from the middle of April until June they will yield bloom from July until October, according to time of planting. For cut flower display they are unique and graceful. If cut when the first four flowers are open and placed well in the water, they will open each bud successively until the whole branch of bloom is fully perfected, lasting from ten days to two weeks thus in

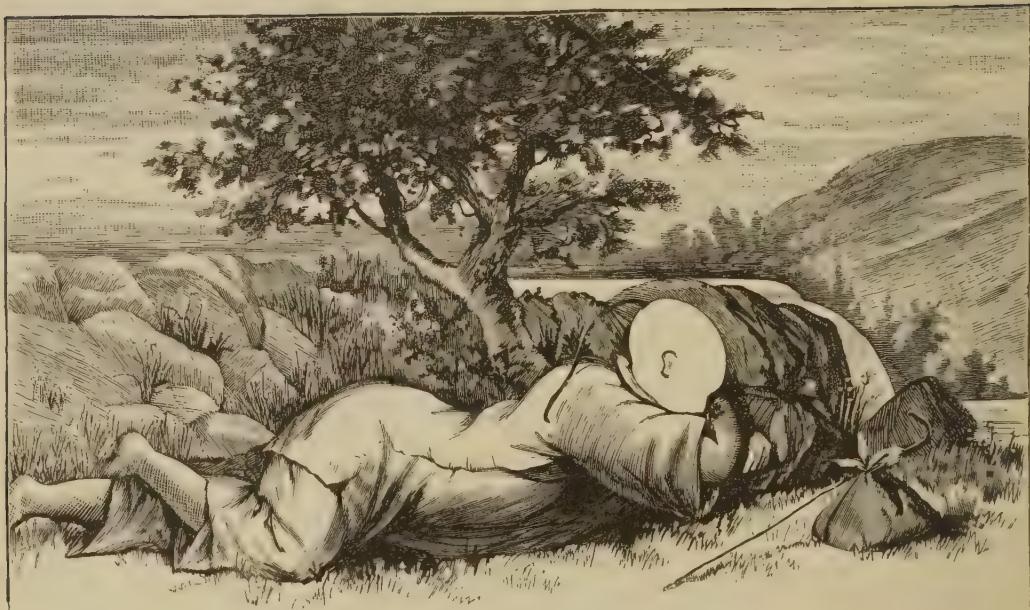
water. The best fertilizer is old and well rotted cow manure thoroughly mixed with the soil, and it is promotive of brilliancy of color. They are moisture-loving plants and need a daily shower bath, unless growing in a wet season.

Gladioli do best if sheltered slightly, especially from the intensity of a noon-day sun. The bulbs must be lifted before the ground freezes hard. If they are planted to the depth of three or four inches a light frost or two will not hurt them.

When bulbs are lifted leave an inch or two of stalk, when different varieties may be tied in bunches and labelled. There are often numbers of little bulblets found at the base of the larger bulb. These, if removed and stored, like the parent bulb, can be sown in drills or broadcast in the open ground, in the spring. They will flower in a season or two. Bulbs should be stored for winter in a dry cool place. They will usually keep well where Potatoes are kept.

H. K.

THE NARCISSUS.



" BESIDE A RIPPLING, BABBLING BROOK,
AND LAID HIM DOWN TO REST."

In far-off regions of Cathay,
An aged father, dying, lay.
On either side, a son,
Who for their sinking father wept—
Their mother for long years had slept—
While moons their course had run.

The father raised his palsied hands ;
To his first-born he gave his lands,
All his possessions great,
Except one acre, poor and bare,
The younger son, he gave, as share
Of his immense estate.

After the last sad rites were paid,
The elder son made haste and laid
Rich feasts for all his friends ;
Banquets he gave—made gorgeous show ;
His wealth, quick-gained, was quick to go ;
Who earns not, soonest spends.

The younger son, mocked on each hand
Became a wand'rer in the land,
His life robbed of its zest ;
At length, way-worn, he reached a nook,
Beside a rippling, babbling brook,
And laid him down to rest.

The fragrance of the op'ning flowers,
The brook's low murmur through the bowers,
The Willow's rhythmic sweep,
The birds' sweet and bewildering notes,
Through which the insect music floats,
Soon lulled him off to sleep.

And in his dreams, a spirit bright,
A water-nymph, in robes of white,
Beside him, softly said :
" Take of the plants which bloom so fair
Around about you, everywhere,
To your own native glade.

" Plant them, attend them, love them well ;
There shall be wrought a magic spell
If you them safely guard.
Who works, and waits, and watches, may
A glorious harvest see some day,
And reap a rich reward."

Surprised, he woke and looked around,
The nymph was nowhere to be found ;
The mist above the stream,
Disporting in the sunlight gay,
Reflected light and rain-bow ray,
The " naiad" of his dream.

With careless laugh, he started on ;
But, ere he many rods had gone,
Dream-haunted, turned him back,
And spent the day in gathering there
Bulbs from the flowers that bloomed so fair,
Until he felt no lack.

Then sought his home ; with care and toil
Placed them in his unfruitful soil,
And screened them from the sun.
He watered, watched, and nursed them well,
Forgetting quite the " magic spell,"
So much of love they won.

Their tender shoots and blades of green,
Up-springing the bare rocks between,
So wrought upon his heart
That soon, these children of the air,
The offspring of his love and care,
Seemed of his life a part.

And so, when dawned the New Year's day,
The people came from far away
To see a dazzling sight.
What was before a barren knoll
Is decked—so swift the seasons roll—
With blossoms waxen white.

It seemed a fairy table spread
With snowy saucers ; and, instead
Of delf and porcelain,
See ! golden cups are clustered there,
All filled with creamy nectar rare,
And free from flaw or stain.

The people came in countless throngs,
With pipe of reed and beat of gongs,
To buy the flowers rare.
The saucers white, the cups of gold,
Brought to their owner wealth untold,
A plenty and to spare.



"THE FLOWERS THAT BLOOMED SO FAIR."

So to the poor he gave away,
Till not a soul in all Cathay
But owned a wondrous flower.
The rich, the poor, the young, the old,
Drank nectar from the cups of gold,
No matter what their dower.

Time passed ; ere many moons had waned,
The elder lost, the younger gained,
All the possessions late
Which seemed at first so rich a prize,
When looked upon with wistful eyes,
Their father's large estate.

All from the care of bootless flowers,
Which waste their lives at morning hours,
Had these vast riches grown.
While fertile fields had laid a waste,
Rich harvests, green and golden, graced
A barren heap of stone.

And though decades have gone for aye,
When dawns the Chinese New Year's Day,
In ev'ry humble room
In palace and pagoda fair,
You'll see in every window there
The sweet Narcissus bloom.

And if the first bright buds appear
Before the dawn of the New Year,
'Tis thought an omen good ;
For through the year that house will see
Health, wealth and sweet prosperity,
With never lack of food.

And to the little ones they tell
The story of the magic spell,
And teach them "well to guard
The little that they have, that more
Be added to their meager store ;
For work reaps its reward."

And more they teach : "a little earned
('Twere well if more the lesson learned,)
Is worth much gift-bestowed ;
For he who has but little gained
Has knowledge of its worth attained ;
Who lifts it—knows the load.

"One mediocre talent prized,
For which one's ease is sacrificed,
To make of it the most,
Is worth ten, which, as time slips by,
Unused, forever idly lie,
Though much the owner boast."

Another lesson they repeat :
"The best, oft times, lies at our feet,
If we but stoop to win ;
The things which many most despise,
May be the means by which to rise,
If with them we begin.

"For he who builds a temple fair
Begins to build, not in the air,
But from the stones around ;
Foundation lays he, strong and true,
And so, with common things, must you,
If you would 'much abound.'

And if we be not rich or great,
And have not lands or vast estate,
Perchance, some humble flower,
Unnoticed, and unknown before,
May bloom beside our cottage door,
And bring us better dower."

Thus do they speak in far Cathay,
Upon the happy New Year's Day ;
And then, through all the land,
As emblem of his thrift and care,
Each citizen is seen to bear
The "Lily" in his hand.

A BOTANIZING TOUR IN THE SOUTH.

NUMBER I.

In the old Colonial days, and during the early years of the present century, Virginia and the Carolinas were the principal seats of botanical activity upon this continent. The names of WALTER, CATESBY, PURSH, the two MICHAUX, ELIOTT, BERTRAM, and others, are indissolubly connected with the natural history of these States. Virginia and Carolina have furnished specific names for more plants than all the other States in the Union. Yet the botany of these very States is much less thoroughly known to-day than that of many of the newer States and Territories of the West.

Owing to social conditions, now happily passed away, the southern mind early received an unfortunate bias toward the arts of politics and law, in so much that, at the time the civil war broke out, the study of science in southern colleges had almost ceased to exist. A new light and a happier era has dawned, but the natural resources of the whole southern country are still very imperfectly known.

The writer has, for several years, devoted much attention to the botany of Eastern Carolina, and, early this spring resolved to explore the central and western parts of the same and adjoining States.

Leaving Washington, D. C., at 10 P. M., April 10th, *via* the "Piedmont Line," daylight next morning finds us in the neighborhood of Lynchburg, Va., in the heart of the Virginia Tobacco country. The view from the car windows is far from inviting. Unthrifty farms, with miserable log cabins, disreputable rail fences and hungry-looking fields, gashed and gullied by rain, is all that one sees in the outlying district, while the towns, occasionally passed, present, if possible, a still more unprepossessing appearance.

After riding at express speed for hours through this dismal country, one feels like weeping because the good King JAMES, in his *Counterblast to Tobacco*, did not succeed in blowing the smoke-producing weed to perdition.

At Greensboro, N. C., we change our direction and travel eastward, passing through Durham, a town dear to the hearts and pockets of consumers of cigarettes. Here are located the largest

cigarette factories in the world, employing in their fabrication and subsidiary employments a population of eight or ten thousand. Not caring much for cigarettes, our stay in Durham is very brief, and we proceed still eastward to Raleigh, the State Capital.

Raleigh is a fine city, with street cars, electric lights and other metropolitan luxuries. The surrounding country is very fertile, and produces large crops of Cotton, Pea-nuts, Tobacco and Corn, as well as Grapes, Peaches and Apples. We found Rose bushes, in house yards, already covered with blooms, April 13th.

From Raleigh we proceed to Goldsboro, eighty miles east, the scene of SHERMAN'S last great battle, wherein he worsted General JOHNSTON. Goldsboro is in the midst of the pine-barren region, and the country does not amount to much, agriculturally speaking.

In all the long ride between Greensboro and Goldsboro we see the farmers busy plowing. The motive power is, in most cases, where a white man holds the plow, a single mule or a rickety looking horse. The colored brother, and he is about twice as numerous as his white compeer, shows a decided preference for a smallish, long-horned bullock, which he controls by means of a single rope line tied to one of the animal's horns. The plow is a small, toy-like affair, which turns a furrow three inches wide by two inches deep.

Commercial fertilizers, guano, phosphate, or bone-dust are in universal use in this region. It is estimated that the cost of fertilizers amounts to one-third the selling price of the crop. The system known as "planting" is the one most prevalent. The "planter" devotes his entire tillage to one crop, Tobacco or Cotton, and buys his provisions, and even hay for his stock, from the store-keepers, who furnish the goods on credit, taking a chattel mortgage on the growing crops, charging, of course, exorbitant prices. By this beautiful system, handed down from ante-bellum times, the hard working planter often finds himself at the end of an apparently "good year," in debt to his merchant and nothing to show for his labor. Few of the farmers own the land

they cultivate, though most of it is for sale at from \$3.00 to \$5.00 per acre. Dense ignorance everywhere prevails among this class, and under their unscientific and wasteful management the land rapidly deteriorates. Here and there an intelligent farmer is met with who makes his land pay a clear profit of from \$20.00 to \$50.00 per acre per annum. But such cases are, unhappily, very rare.

At Goldsboro we turn our faces southward once more, and proceed to Wilmington, at the mouth of the Cape Fear River, where we unship our presses, and begin collecting specimens.

A few words as to the geological features of the country will help to elucidate its botanical peculiarities.

The great Appalachian system melts into the low plains of Central Georgia and Alabama. In Carolina the land slopes from the crest of the Blue Ridge Mountains to the Atlantic Ocean, a distance of some four hundred and fifty miles. This feature divides the State into three well marked vegetable zones: the Alpine, or mountain zone; the littoral, or swamp zone, and the central table land, which partakes more or less of the vegetation of both.

The soil of the low district is mostly pure sand, diversified by peat bogs and swamps. The climate is sub-tropical, and the chief cultivated crops are Corn, Cotton, Tobacco, Pea-nuts and Rice. The native forest growth is chiefly Yellow Pine (*Pinus australis*), Bald Cypress, Sweet and Sour Gum, and Red Cedar.

Wilmington is a large export depot for pine tar, turpentine, Pine and Cypress lumber and Cotton.

The surrounding country is flat and sandy and of little agricultural value, but supports an astonishing number of species of wild plants. Many of these are found nowhere else, and nearly all are of great interest to the student of nature.

From April 20th to May 1st, we found in bloom three species of the Pitcher Plant (*Sarracenia*); two species of *Drosera* (*Sundew*); two of *Pinguicula* (*Butterwort*); and two of *Utricularia*, (*Bladderwort*), all of which are insectivorous. The miniature bear-traps of *Dionaea muscipula*, the famous fly-trap, were also active, though the plant was not yet in bloom.

In addition to these, the savannahs are in most damp spots, covered with a nearly impenetrable tangle of *Vaccinium* and other genera of the Heath family. The Sweet Bay (*Magnolia glauca*), perfumes the air, in which good work it is assisted by the fragrant Yellow Jasmine (*Gelsemium sempervirens*) and the beautiful Water Lily (*Nymphaea odorata*, which is just beginning to expand its creamy petals.

In and around the city, the elegant shade tree, *Melia azedarach* (*Pride of China*), is covered with the curious purple flowers. This tree is closely related to the Mahogany tree, and thrives in the driest sand. When it is given room enough to develop itself, it produces a nearly globular head of graceful, feather-like foliage. The *Pride of China* is quite hardy as far north as New York, and should be more extensively cultivated, both for its ornamental appearance and its valuable wood.

GERALD McCARTHY.

THE "GUERNSEY LILY"—"LILY OF THE WRECK."

An instance of the sudden and unusual appearance on one of the channel islands, of this beautiful flower, known by English florists as the "Guernsey Lily," may not be without interest to the readers of VICK'S MAGAZINE.

The first specimen of this splendid Eastern bulb that appeared in Europe was found growing and blooming at high water mark on the Guernsey shore, a few weeks after the total wreck of a large, homeward bound East Indiaman, which, with her passengers, crew and

precious freight was lost on the perilous reefs of the Channel island. This flower being the only relic that survived of the rich cargo, was called by the finder, "The Lily of the Wreck."

From its foreign appearance and great beauty the plant became an object of interest to the botanist, and soon acquired a notoriety which attracted the attention of the gardeners of the island, and under genial culture it became an article of commercial value. It was erroneously supposed to be one of the rare indigenous

productions of the soil, and thus obtained the name it still bears of "Guernsey Lily," but the traditional history of the plant still lingers among the peasants on the Guernsey coast, who remember it by its old descriptive name first given to it, as "The Lily of the Wreck."

The following extract from a poetic account of the shipwreck mentioned by my sister, AGNES STRICKLAND, recounts the magic introduction of this plant to European cultivation.

MRS. C. P. TRAILL.

* * * * *
 Nought reached the land in that dreadful hour,
 Save the simple bulb of an Indian flower,
 Which the surges washed from the foundered bark ;
 And, when autumn came, at high water mark,
 The Guernsey fishers, wondering, eyed
 Its buds expand in roseate pride,
 And said, so fair a plant, before
 Had never bloomed on their rugged shore.
 "The Lily of the Wreck," at first
 'Twas called, by those who had fondly nursed
 The pilgrim flower ; but its fame, in time,
 Went forth to every western clime.
 And now those Orient Lilies claim
 From Guernsey's isle their floral name ;
 For they flourish as free on its rocky strand
 As under the suns of their own bright land.

THE BORDERED MORNING GLORY.

The bordered Morning Glory, *Ipomoea* (or, as it is termed by some, *Pharbitis*) *limbata elegantissima*, is a very beautiful rapid-growing, annual, climbing plant. It is of vigorous growth, attaining a height of from fifteen to twenty feet, having cordate, three-lobed leaves, at the axils of which are produced its very showy flowers. This variety is one of the finest of the genus, the large, funnel-shaped corolla having a rich, bluish-purple center in the form of a star, and as it is also bordered with a broad, pure white margin, it has a remarkably attractive appearance, and then the flowers are produced in the greatest profusion from June until frost.

This *Ipomoea* is a plant easily cultivated, doing best in a moderately enriched, deep soil, and a sunny situation. It does best when started under glass, and the seed should be sown about the first of April in a well drained pot or pan filled with rich loamy soil; sow thinly and cover slightly, place in any warm, moist situation, close to the glass, and as

soon as the young plants are strong enough to handle they should be carefully repotted into three-inch pots; pinch back the leading shoots frequently, and gradually expose to the open air, and plant out as soon as all danger of frost is over and the weather has become warm and settled. Support must be given before the plants commence to run, and during the growing season they should be frequently examined and the young shoots trained so as to occupy the required space, whether to cover lattice work, trellis or pillars. This training is absolutely necessary if we would obtain a satisfactory result and do justice to the plant in question. In the event of drought a mulch of coarse littery manure and liberal waterings will prove to be beneficial. In dry weather the plants are sometimes attacked by the red spider, and as soon as this pest is noticed they should be freely and frequently syringed. Seeds are very freely produced, and by this means the plant is increased.

CHAS. E. PARNELL, *Queens, N. Y.*



FOREIGN NOTES.

ROSES IN POTS.

In growing a plant in a pot, we should remember that it occupies a very different position compared with one that is planted out and growing in a border. Where the roots of a plant can wander about in the soil the plant can pick and choose, as it were, what it will take up and what it will reject. In a pot this is different. Here the plant can only have what is contained in the pot, or what we administer to it; and remember it has to accept the whole of what we put there—it has to take up everything, and this is the reason why we may often, with impunity, pour over the roots of plants in the border strong liquid manures, which similarly applied would quickly destroy and kill the same plants if they were growing in pots.

I think the two greatest enemies to plants in pots are want of drainage and sour soil. Perhaps the one is the cause of the other. Many people do not see any necessity for drainage; they do not understand why careful gardeners put all those crocks in the bottom of a pot. In the same way the same people cannot see why farmers and gardeners go to the expense of putting in drains. Why do they do it? Because the question has been thought out by some of those people who think, and who, thinking and building experiments on one result after another, long ago discovered that plants will do no good if the soil in which they grow is kept too moist. I could go into this question scientifically and give you the results of some of these experiments relating to the why and the wherefore of draining, but shall ask you to take my word for this much, that drainage in pot plants is absolutely necessary. Even in cases where we use every effort to keep the drainage right the soil may become sour, and I have heard it said that the roots of plants will never have anything to do with any portion of the soil which has once become sour. There are several points, the neglect of which may lead to sour soil. I am leaving drainage out of the question now. One of the first or

most likely causes is potting or repotting a plant into too large a pot; another is over-watering a plant, keeping the soil in an everlasting state of slop; still another is potting the plant in soil or compost which is too close and binding, and which does not allow the water to percolate through. There is one more point which I may mention as a reason why soil becomes sour, and it is this, that many amateurs and gardeners when they are not certain that a plant requires water press their fingers on the surface of the soil; the result is that the soil becomes like a cake.

In potting the plants at first let them be placed into pots as small as the roots will allow. If you err on the question of drainage, err on the side of too much rather than too little, the compost should be made up like this: One part old sods or good turfy loam, half part of old manure, one-eighth part of leaf-mold, one-eighth charcoal or sand. The compost should not be riddled but well mixed together. The pots must be well rammed. Any old thick roots should be removed or cut back, but all fibrous roots should be preserved. Some of the plants may make so much growth and so many roots that it may be necessary to repot them during the first season. In that case place them into pots the next size larger, taking care not to break the young roots. As a rule one repotting a year should be sufficient.

Pruning Roses in pots is rather a tough subject—I mean that it is a tough job to reconcile the teachings of the various masters of the art. My plan is a very simple one, and I adhere to this rule, “The more you remove from a Rose tree the finer the blooms will be.” In the case of Hybrid Perpetuals, I advise that all the branches be cut back to, at most, three eyes or buds, and the result will be generally one or two strong shoots from each branch. This system will save an immense amount of tying work, bending shoots down, &c., and in my opinion give a better result. With the long and coarse growing Teas, the Dijon section, and

Marechal Niel, this short-pruning system will not answer; these, blooming on laterals thrown out from last season's wood, must have some of the branches left long, simply removing the unripe and weak tops. But the dwarf-growing Teas flourish on the hard-pruning system, and give magnificent flowers, so I shorten my dwarf Teas back to about two eyes on each shoot. I have probably two hundred standard Teas in pots; some of them this year were cut back hard, while others only had the weak and old wood taken out. In the one case I have strong, vigorous shoots, grand foliage, and magnificent blooms; in the other I have weak foliage and small blooms. The moral is obvious.

I must go back again to the subject of watering, for although growing Roses in pots is made up of a number of small matters I really think that of watering is the most important; and I think it is the matter in which discretion is most called into play. If a plant is newly potted, or is without leaves, or if there is no growth going on, it stands to reason that a less quantity of water is wanted. Where a plant is in full growth, or where the pot is full of roots and the plant growing, we may give water freely. But I would far rather see a plant have too little water than too much. The plant in the former case will give us notice of its wants by drooping its leaves, though it is not wise to allow matters to go so far. In the latter case we shall find the leaves turning yellow, but at this stage I should say the soil in the pot has become quite sour, and the mere withholding of water will not restore sweetness to it nor healthy growth to the plant. The infallible rule for all is the knuckle applied smartly to the side of the pot; if it ring out bell-like water is wanted, if it sounds dull and solid none is necessary. It is astonishing how much drying a pot Rose will stand. The roots may be dried until the shoots shrivel and the plant appears to the eye quite dead, but plunge it in a tub of water for twenty-four hours, and behold! the shoots plump and green and the buds again swelling.

I am afraid that, so far, most of my remarks will apply more to the Tea Roses than the Hybrid Perpetuals. I certainly consider it a waste of time to grow these latter in pots, for various reasons. One is, because we can grow them better and

with less attention in the open ground; another is, that when we take one crop of blooms from the Hybrid Perpetuals we are not likely to get another for some time. Another reason is, that the Teas stand more knocking about—don't smile, let me finish—I mean that they do not want so much rest, and they may be made to bloom much more certainly at such times as Christmas, for instance. Take the grand old Tea Rose Niphetus, or the almost equally useful and beautiful Caroline Kuster; one can get from four to six (may be more) crops of bloom from these Roses in one season.

A few words on manures. These are only of advantage when the plant is capable, or in a fit state to absorb them. To give manure or stimulants to a weak or sickly plant is simply poison to it. Where a plant is growing in such a compost as I have described it needs very little until the roots have filled the pot. Then, if the flower buds are formed weak liquid manure may be administered, but give too little in preference to giving too much. Weak and often is better than strong and seldom. Feasts and famines are neither of them good for the human digestion, no more are they beneficial to plants.

Where we do not, or cannot, repot our Roses, we may keep them strong and healthy for a long time by the use of stimulants and patent manures. These are bones, bone dust, dissolved bones, and other concentrated preparations. These should be put on the surface, or mixed with the soil we top-dress with, when the plant is in growth, not when it is at rest. I must say something about that curse of Roses—mildew. This is often the ruin of crops under glass. An attack may be brought on very quickly with forced Roses by simply opening a ventilator and letting the cold wind in for a few minutes. It cannot be so easily cured. When we can command hot pipes the remedy is simple. This is to paint said pipes with sulphur made into a paste, but do not have too much fire at the time you apply it. In cold houses we must prevent mildew. Keep it away, once it gets a footing in a house it is good-bye to blooms and leaves for some time. We must keep it away by using, when we syringe, a little soft soap at the rate of half an ounce to the gallon. The

best way to prepare this is to mix two pounds of soft soap with boiling water, adding at the same time a wineglassful of petroleum, and making up the quantity with hot water to five gallons. If a little tobacco juice be added all the better, or rather all the worse, for the green-fly. When we do syringe we must put half a pint of this delicious mixture into a large can of water.

D. GILMOUR, JR., in *Jour. of Horticulture*.

MANURES FOR POT PLANTS.

A writer on "Artificial Manures for Pot Plants," in the *Journal of Horticulture*, recognizing the value of liquid manure from the stable, asserts that it is often difficult to obtain, and that its use in conservatories is objectionable. He points out, by comparison, the advantages of artificial manures:

"They are cleaner in their method of application, as nearly all are used by sprinkling a small quantity over the surface soil before watering. They are also more convenient to use, because the plants that require a little assistance when they have become root-bound can have the necessary quantity given to each pot, and the watering be carried on without interruption that takes place when a mixed collection has to be watered. When using liquid manure it is then necessary to go over the plants twice, first to water those that require stimulating, and the second time to water those that should have clear water. The action of artificial manures is also very quick on all kinds of vegetation, bringing sickly looking plants into health again and starting stunted ones into vigorous growth."

He has found that equal quantities of Peruvian guano and a commercial fertilizer sold in the English market, and for which our best brands of commercial fertilizers can, no doubt, be substituted, make an "excellent stimulant for Palms, strong growing Ferns, Richardias, Aza-leas, Fuchsias, Begonias and Primulas, and, in fact, nearly all plants. Its effect on those named is quite magical by imparting to their fronds or leaves that deep, glossy green color, which is a sure indication of health and luxuriance, and if used at regular intervals it will keep them in good health as long as other conditions are favorable."

Large plants grown for decorative purposes should have the feeding carried on regularly, but gradually lessening the supply for a few weeks before using them for embellishing rooms.

"Any plants that have become sickly looking can often, by the aid of a few doses of nitrate of soda, be quickly brought to a perfect state of health again; but being very powerful in its action this must be used in small quantities, a piece about the size of a marble is large enough for a twelve-inch pot. This fertilizer has also the effect of forcing plants on much more quickly than other manures, and is therefore valuable for assisting those that are naturally of slow growth.

"I also find that during the summer months, when soft water cannot be obtained for them, a little dissolved in the water used at the rate of a teaspoonful to two gallons of water will keep the plants in capital health; whereas if hard water is used without the addition of soda or some other substitute the young growths assume a brownish tint which is not in the least desirable. There can be no doubt that all kinds of plants are greatly benefitted by having frequent changes in the food supplied to them. A little close observation will soon convince any one on that point. I have often noticed that when the use of one kind of manure is continued for several weeks the plants receiving it do not respond to its stimulating influences so readily as when it was first given. When such is the case give a few waterings with clear water and then apply some other kind of manure, and health and vigor will be continued."

Roses in pots are mentioned as being particularly benefitted by judicious feeding. Soot water, which is prepared by allowing a bag of soot to soak in a tub of water, is an excellent manure, taking care not to use it strong enough to leave a sediment on the surface of the soil of the pots.

A NEW VEGETABLE.—A correspondent of the *Gardeners' Chronicle* has been testing one of the Cruciferæ, *Lepidium Draba*, a European weed, as a vegetable, and is "astonished at its excellence. It suggests Spinach, and Asparagus, too, is present to the palate, but the general flavor, substance and succulence are altogether unimpeachable."

PLEASANT GOSSIP.

CRAB CACTUS.

Please answer the following in your "Pleasant Gossip."

I have a Crab Cactus, and your beautiful plate of it in the May number is not exaggerated, if, indeed, it hardly equals the original beauty, that is, as mine was two years ago. A year ago this last winter it was full of buds, but every one of them turned white, or whitish, and fell off when they were nearly full grown.

In the spring I cut back most of the long branches, thinking it would send out a new growth and do better; but not so, for it just stood still, neither enlarging nor diminishing, and this last winter I had a few buds and all blighted just like those of the previous year. What is the cause, and what is the remedy for this?

Mine is in a hanging-pot, suspended in the front of my bay-window. Ought it to be in the back part nearer the glass, where it could get the direct sunshine on it, or ought I to change and give it fresh soil? The soil in which it is now growing was from the garden, with some sand mixed with it.

With regard to the "Flies about House Plants," mentioned in the April and February numbers of your MAGAZINE, I was very much troubled with them till I saturated the infested soil with a diluted solution of carbolic acid, ten drops in a quart of water. This will not injure the plants and kills the little worms, and then the trouble with both worms and flies is at an end.

MRS. S. I. P., *Eldon, Mo.*

By the first of September commence to decrease the amount of water supplied to the basket containing the Crab Cactus, and expose it fully to the sun, the object being to harden and ripen the new growth. After a short time the supply of water should be very short, in fact, the plant should be allowed to go nearly dry. In December growth may again be started by supplying more water. With this treatment and with the plant in a light, open soil, we do not think it will throw off its buds.

LILY OF THE VALLEY.

Please give me some hints, through your MAGAZINE, about the culture and management of the Lily of the Valley. M. B. H., *Fishersville, Va.*

Lily of the Valley is a hardy plant that will thrive well in a good soil and a place a little shaded. Usually the plants are set and allowed to take possession of a space of ground, growing thus in a mass, and in this way are usually satisfactory. However, more bloom and better can be

obtained if the plants are set in rows and kept clean by frequent use of the hoe. In this case most of the young plants, or those that appear between the rows, can be cut away, reserving the strength of the soil for the plants in the rows.

For winter blooming strong young bulbs or pips are used. Set from three to a half dozen pips in a common sized pot, either in soil or moss. The pot should stand in a warm place and be covered to exclude the light until the shoots put out, and be kept constantly moist. After the shoots have made a good start the pot can be placed in a light place, where they will develop rapidly if the supply of water is maintained. Moss appears to be as good as soil to force the plants in.

SCALE INSECT ON ORANGE.

I would like to have you tell me what to do to get rid of the scale bug on the Otaheitan Orange. I have been hand picking them, and still they come back again. Please tell me what soil is the best for it.

AN OLD SUBSCRIBER, *Carlyle, Ill.*

The kerosene emulsion, which has been so frequently described in our pages, is the best known remedy for scale insect. Syringe the plants with it, and afterwards with clear water. Repeat, if necessary. The soil for young Orange plants in pots may consist of equal parts of good meadow loam, leaf-mold, sand and old manure mixed together. Plants at the bearing age can be potted in a soil composed as above with the exception of the sand, which may be omitted.

FLOWER-SPUR OF HOYA.

A lady told me, lately, that she never picks the blossoms off her Hoya, but lets them drop off themselves, and the little knob which is left is sure to produce bunches of flowers next year. I mention this thinking you may not have noticed or heard of it.

A. A. DES BRISAY.

The statement above is a fact very generally known, especially by those who have cultivated the Wax Plant; the flower-spur should always be preserved.

MY FRIENDS, THE FLOWERS.

Ye beauteous blossoms, bright and frail,
My spirit's sweet enchanters, hail !
Ne'er did your gentle magic fail,
Whether ye blushing be, or pale,
Or dyed in sunlight's golden hue,
Or wear the sky's unsullied blue;
Swinging full censers of perfume,
Or gladden me with scentless bloom ;
Whether low nestling on the ground,
Or decking shrub and tree are found ;
Whether in summer's prime ye blow,
Or nigh the season of the snow ;
Whether your home in open air
And all the clime's caprices dare,
Or in a crystal-walled retreat,
Pampered, ye bask in genial heat ;
Whether the tiller's pride ye be,
Or thrive in wilds, unkempt and free ;
Whether in myriads on the mead,
Tempting the swarming bees to feed,
Or in the twilight of the wood,
Pining, a sparse and puny brood,
Or, mateless, in lone nooks upspring,
Or to the creviced crags ye cling ;
Wherever hiding, still my friends,
Whose graceful forms my speech transcends.
In every mood, of gloom or joy,
When thought is light, or cares annoy ;
In sunny or in darksome hours,
Always my comrades boon, O, flowers !

TUDOR WILLIAMS, *Albany, N. Y.*

GARDEN NOTES AT ELMDALE.

With regret, we notice a lull in the brilliancy of the shrubbery border during July, and this was so obvious in past years, I determined that it should not be so decided in appearance this year, and have succeeded in improving this drawback, for it is about the only one of the hardy garden, by introducing a few plants from the greenhouse as well as some of the more brilliant annuals, such as Phlox, Zinnias, etc. These were started early in hot-beds, and have quite an effect planted in open places in the border.

Rhododendrons, Weigelas, Bush Honeysuckles, Deutzias, and the like, for weeks back have given clouds of bloom, while further back early Spiræas, Japan Quince and other earlier bloomers have done full duty, but now their grandeur has succumbed to more quiet forms.

The average amateur is now, perhaps, the least busy of any time of the year, but it should not be so; there is much to be done. Preparation for the fall fairs is in order, and particularly with the case of such strong growing plants as Geraniums, Coleus, Heliotropes and Salvias, the lifting of which, if done now, gains much.

Plants bedded out in May have be-

come well started, and are now making vigorous growth, both top and root, but active as the roots are, by lifting carefully, nearly every one of them may be preserved, while two months later large numbers would be necessarily destroyed.

I would not dispute the argument, if brought up, that all plants of this kind for winter blooming are better lifted now than later, for it looks to reason that while root growth is in advance of top growth, especially in early stages, if we lift now the favorable condition of roots in quantity to correspond with top are secured.

The pride of the greenhouse at this time, indeed during this whole month and next, is the quantities of Gloxinias, Achimines, Tydæas, and all summer-flowering, tender bulbs.

I have been trying to decide which I would say, "take," in case it was necessary to part with either my imported Gloxinias or the seedlings raised by my own hands. Those imported ones are simply superb, but so costly for the newer kinds, while the seedlings show every habit of growth found in these, and in a number of specimens equally as fine flowers, coloring, shading, growth and size all considered, with the cost thereof almost nothing. Those sown in January, 1888, are not yet fully developed, but those of January, 1887 sowing are now as fine as one can wish for. Every Monday morning early, they receive a liberal quantity of quite strong manure water, the effect of which is easily seen. Four plants have not received a particle, and appear backward enough. It seems as though too much can hardly be given. I never completely dry off the bulbs, do not believe in the practice, as it takes too long to start them again. After blooming, the manure water is discontinued, as well as the general supply of water, which ripens the growth, and later all leaves are taken off, plants taken out, earth shaken off, and repotted in fresh, rich ground composed of two parts sandy soil from the general heap of potting earth, one part of decomposed cow manure, and another of refuse Hops.

Chrysanthemums, for very fine specimens, require every attention at this time. Use all means to secure a healthy, robust growth. During the dry weather, form a basin around the bedded out

plants, fill with coarse manure, and water freely twice a week, also use manure water.

Wherever watering has to be done out of doors, it should be constantly borne in mind that mere sprinkling is a positive injury. Loosen the soil, then apply the water toward evening, and early in the morning again stir the soil. Thorough cultivation will do more toward keeping the soil moist than water applied every day to a hard, crusted surface. **FISKE.**

RECENT EXPERIMENTS.

A summary of Bulletin No. 2, of the Ohio Agricultural Experiment Station, issued in April, indicates as follows:

Of the newer varieties of Strawberries thus far tested at this Station, the following have given the most promising results, viz.: Bubach, Gold, Jessie and Ohio.

The following are worthy of further trial, viz.: Itasca, Jewell, Ontario, Summit and Warfield.

The following are classed as doubtful, or not sufficiently tested to justify an opinion, viz.: Belmont, Bomba, Carmichael, Covell, Crimson Cluster, Gandy, Henderson and Lida.

Of the newer Raspberries, the following are classed as promising, viz.: Carmen, Earhart, Golden Queen, Hilborn and Johnston's Sweet.

The following are classed as doubtful, or not yet fully tested, viz.: Rancocas, Nemaha and Springfield.

Crimson Beauty and Hansell are found unsuited to the soil and climate of this Station.

Of the newer Potatoes the largest yield obtained at this Station over a period of three seasons (266.8 bushels per acre) has been from Lee's Favorite. Empire State and Early Ohio come next, ranking above Early Rose, which has yielded 225.4 bushels per acre for the same period.

Larger yields of Potatoes have invariably been obtained from planting whole than cut Potatoes; but a portion, at least, of this increase has been offset by the greater cost of the seed and the larger per cent. of small Potatoes in the produce.

Complete fertilizers have given the largest increase in yield on Potatoes. The application of phosphoric acid (in superphosphate and bone meal) appears to have been attended with profit, while

that of nitrogen alone (in nitrate of soda and ammonia) has resulted in loss, as has also that of potash alone.

The importance of careful selection of seed is forcibly shown in the experiments with Tomatoes in which the Acme, selected with a view to earliness, for several seasons has outstripped other strains of that variety by about ten days.

DIFFICULTIES IN GARDENING.

A lady of Guayamas, Mexico, some time since sent us an interesting letter, in which she deplored her inability to secure new subscribers for the MAGAZINE. She says :

But few of the ladies read English, and the men are mostly interested in mines and commerce. Besides the soil is very sterile and water scarce and dear. I will tell you how I made my little garden.

But first, please tell me how to get rid of earth worms, which feed on the roots of my plants, especially the bulbous ones, like Paeonies. I have tried ashes and lime with no effect. The ground teems with them.

Our house stands on made land. The space between the hills and the sea is very narrow, and the people find it easier to invade the sea, like the Dutchman, than to level the masses of rocks, called hills. In order to make my garden I had one large square excavated to the depth of four feet, and then, at great expense, filled in with good earth from the ranches, four miles from town. As there are no forests in this part of the country, I could not get leaf-mold, and for the same reason that there was not, I could not get meadow soil. I therefore, mixed the earth I could obtain with sand and well rotted manure, and kept it well watered while I sent to VICK'S for my plants. In due time I received, by express, a splendid box of plants. These all died. I had not facilities for watering them; the ground was probably badly prepared, and the hot summer sun and hotter wind burned them all up. I then ditched my little garden, bringing water from a pipe in such a manner that I could give an ample supply to each plant. I also prepared another small bed, and planted canes in a ditch so as to screen the other plants from the wind. I also planted two Willow trees, one on either side of my garden, and these, with two Cedar trees previously planted, gave me some little shade. I also rigged an awning over the large center bed, and tried once more for a garden. I had better success, especially last summer, as I had plenty of vines. Now my little garden is the wonder of the town, and I shall try to make it still prettier in the future, but it is very discouraging to spend months of care on a set of plants and have them burnt up in one single night by the hot wind. However, now my "cane-break" is very thick, and I think I can defy the wind. The plants I have look finely, and the Fuchsias and Geraniums grow like weeds.

We fear it will be a difficult matter to free the soil, in this case, from earth worms. A heavy liming would probably produce more effect than most any other harmless substance.

SUGGESTIVE OF SOME THINGS.

I had to leave my writing for the Saturday special of the Boston *Brilliant*, on the "Distinction of TOLSTOI's Types of Nobility," to set the graham bread, which not one hired girl in a hundred can be trusted to do, though it is the simplest thing on earth, and the range wanted clearing out, which nobody could do quicker than myself, so I did my head up in that arrangement of clean crash, which is more like the Egyptian head dress than anything else, and, of course, just then came a knock at the side door. It did cross my mind that I might whip that towel off, but I didn't mean to be afraid to let whosoever came see that I was busy and in working order. It was the man with a tin measure and covered red pail, which is a familiar vision at Yankee side doors in winter. Sometimes he brings hot hominy, sometimes pickles by the quart—this time it was grated Horse Radish, fifteen cents a pint, eight cents a half pint, and taste of it on the spoon to see if it is pure and not too much raw Turnip to it. I don't object to a little Turnip in the Horse Radish "to take the screech out," as Irish NORA says. Of course, womanlike, and of thrifty impulse, I said, no, first off, for we had yards in the garden. Then I remembered the ground was frozen for Christmas, and WENDELL PHILLIPS, my son, just out of grammar school, had persistently omitted to dig anything in the garden, because, he said, "there was no chance to rise in gardening," and the Horse Radish this season was not likely to be very available, so I said I would take five cents worth, just to encourage trade, for it was worth that to dig and grate it, and folks round here were too shiftless to raise it or to dig it when they had raised it. Whether it was that remark and my head being done up in a towel to keep off the dust, I won't say, but the plain, sensible, pleasant spoken man was drawn into a back-door chat.

"Fact, madam. Its surprising. Now, you wouldn't believe what a lot of this stuff people buy of me. I took the notion down in Fulton Market, New York city, of an old German woman, who used to sit there and grate Horse Radish and sell to whoever came along, five cents worth and three cents worth, and I tried it on here. Took me three or four years

to work into a right good trade and get folks used to buying of me; but I kept coming, and last year, down here to Hyde Park, how much do you think they took of me? Four hundred and sixty-five gallons, besides sixty or seventy gallons of German mustard, I make up and sell to whoever wants it.

"Don't you ever bring pickles?" I put in.

"I did, ma'am, but the last two or three years, for some reason, they've been asking too high for pickles. \$9.00 per barrel, and the pickles were not what they ought to be, either, and I wouldn't carry any unless they were first-rate, so I've kind of given up carrying pickles. But the Horse Radish people take first-rate. I buy it at Fanueil Market and grate it myself and take it right to them—no, I don't have any team, just go up on the railroad and start in. Dedham and Readville and Hyde Park and Dorchester, and it don't take me long to sell off a twelve quart pailfull. What you said about their not caring to be at the trouble of fixing it for themselves puts me in mind of SYLVESTER FROST, up here at Arlington. You know that's where most of the Horse Radish about Boston is grown, and the FROST BROTHERS, they were pretty big market gardeners out there. I came round with my pail, and SYLVESTER says, 'Well, if I don't call that cheek! Here, I've got tons of Horse Radish put away in my cellar, and you come round to know if I don't want to buy some!' Then he ordered a quart, 'cause twas already grated. Its just so—you'd be surprised—I am. Good day, ma'am."

Well, if it wasn't the purest Yankee spirit to go in and make a paying business out of peddling half pints of Horse Radish, and if it wasn't commendable, far-seeing spirit, too. The man evidently had a comfortable business, he was plainly, but neatly dressed, and his face was cheerful and in good condition. He looked like a man who had once been so hard off that he was all the while comforted and surprised at his present well doing. It is no great fortune, but it evidently meant good food and clothes, and something ahead, and the times are coming, if they are not already here, when that small measures of success will be accounted something to be thankful for. It

is more than three-fourths of our New England population can call their own to-day, and I rejoiced quietly in the sight of that man's simple pluck and brave, cheery face.

The moral of this true incident lies in the application thereof. To me it looks several ways for gardeners and people who want to live by the garden.

SUSAN POWER.

FICUS ELASTICA VARIEGATED.

The variegated-leaved India Rubber Plant has not yet been much seen in this country, though it will probably soon be in as much demand as the common va-



FICUS ELASTICA VARIEGATA.

riety now so highly prized as a stately pot plant. From an illustration of it given in the *Journal of Horticulture*, the present engraving has been prepared, which shows the peculiar character of its foliage. "In its early stages the variegation is not very clear, but the greenish-yellow portions change with age to creamy white, and when the plant is healthy and the normal color rich and

deep the contrast is highly effective." It is a valuable decorative plant for halls and other rooms, as well as showy in the conservatory.

STRAWBERRIES.

Every good housekeeper who loves to see her pantry shelves filled with canned fruits, jellies, &c., is interested in the culture of Strawberries, for there is no other small fruit of such beauty and delightful flavor.

Spring seems incomplete when the Strawberry crop is a failure, and since it is, in the South, at least, never a sure crop, we diligently strive to make as sure of it as we can. One great trouble with Southern small fruits is that they put forth their blooms very early and so are bitten by frosts, and so it is always advisable to have a good assortment of late varieties, provided the earlier ones fail. Belmont, Atlantic and Kentucky are among the best of the late sorts, and coming on in time for the growing berries to have the benefit of our long May rains, bear full crops of large berries.

The best plan I know of for keeping the great heavy berries from lying upon the ground is to plant in rows, and lay rough plank, slabs or boards, as is most convenient, close up on either side. Besides keeping the berries clean it holds the moisture so necessary about the roots, keeps runners from tangling about the rows, and serves also as a weed extinguisher. After the fruiting season is over they can easily be removed, if desired. Mice are apt to be very troublesome while mulches of hay or straw are used for this purpose, but they have never troubled the rows where plank is used. I have noticed, too, that straw and hay seem to attract frost, for in rows mulched with this material the plants were injured worse than any others, and when frost no where else is discernible, potato rows mulched with straw will be black and withered, and yet I see that many people use it to the exclusion of everything else for this purpose.

Strawberries are very fond of potash in the soil, and leached ashes is just the thing for them, and if this is applied every year there will be no need of moving the strawberry bed so often. My rows bear three and four years in the same place.

How much trouble we might be saved if the fruit stalks of Strawberries could only support the weight of their berries. James Vick, Parry and Belmont give one less ground for complaint than any other varieties which I have tried.

LENNIE GREENLEE.

THE SMOOTH LUNGWORT.

Am pleased with the illustration, in the June number of the MAGAZINE, of *Mertensia Virginica*. Your correspondent says it grows "in the timber," in Iowa. About ten years ago I added it to the flora of New Jersey, having discovered it as well established in Monmouth and Essex counties. To our botanists it seemed an interesting "find." With us it grows in open, damp places. I have been much interested in its delicate primrose odor and the peculiar display of colors in the flowers, the same flower passing from a pale, incarnate coral to an exquisite turquois blue.

SAMUEL LOCKWOOD, *Freehold, N. J.*

WATER CAN FOR HOUSE PLANTS.

In the May number of the MAGAZINE, page 154, is a description of a pail with tube and pipe for spraying and watering plants. I have used such an one for several seasons, but improve it by drawing it to the top of the room, near the window, by means of a cord which runs through a screw-eye, and which I fasten to a hook at the side of the window. My room is nine feet high, so I have enough pressure to spray my plants as much as I wish.

S. M. W.

COLD STORAGE OF FRUIT.

A correspondent sends a newspaper quotation of some remarks on cold storage that appeared on page 90 of the present volume of the MAGAZINE, crediting the remarks to JAMES VICK, which should not have been done, as they were made by WILLIAM C. BARRY, and so stated, before the Western New York Horticultural Society. The correspondent referred to, says:

"How is this thing, anyhow? If you believe this to be the thing, why don't you prove it and then assert it? Lots of people build on your opinions, when they would go their pile on your assertion."

We should be very sorry to mislead

any one in so important a matter as the cold storage of fruit, and while we name the author of the remarks referred to, the editor now endorses them as practically sound and a simple statement of what has been done. ELLWANGER & BARRY, of the Mount Hope Nurseries, of this city, have such a fruit room built entirely above ground, double walled and filled in with straw, and having dead air spaces all around, which preserves fruit through the coldest winter weather.

What is yet imperfectly known is, how to adapt such houses to varying climates. What might be practicable here, in this way, might not in Iowa or Dakota; but it is probably only a question of degree. How much thicker in a more severe climate must be the lined walls and the air spaces? This can be determined by experiment.

Fruit-growers, and the public in general, have much to learn about preserving winter fruits, such as Apples, Pears and Grapes, but trials are being made in different parts of the country, which will soon establish the correct principles and exact methods of building houses for winter fruit storage.

FLORAL GOSSIP.

I wonder why we do not make more use of the common Asparagus as a plant for the lawn or yard. It is a beautiful plant when well grown, and any one can grow it well who uses plenty of manure. Without berries it produces a fine and graceful effect, its long, drooping branches making it look like a fountain of green mist when seen from a little distance. When its scarlet fruit is scattered over it we have few plants more showy. I know of many old yards in the Eastern States where great clumps of it have been growing for years, simply because of their beauty.

Here is something that I read in a paper, to-day, and I heartily endorse every word of it.

"The farmer who has a neat and well kept garden is almost sure to have a neat and well kept farm, a comfortable and well appointed house, tidy out buildings, stock in good condition, and general thrift all about the premises. And the house-wife who takes pride in her garden generally has a home to take pride in and to be proud of."

I am, and always have been, an advocate of good gardens, both flower and vegetable. No country home is what it ought to be without them. The best part of the family living comes from the kitchen garden, and the amount of enjoyment that the whole family derives from well kept beds of flowers is not to be reckoned in dollars and cents.

Some time ago, I wrote about iron supports for plants in pots, as preferable to sticks of any sort. After trying them for another year I am more than ever disposed to speak a good word for them. I had a very large and fine specimen of *Fuchsia speciosa*, which would have been ruined if it had had nothing to support it but a stake. A visitor slipped, in the greenhouse, and fell against it so heavily that the iron of the rod was bent into almost a right angle, but none of the branches were broken off. With a little care the rod was straightened out and the damage done repaired without serious results. These rods are not expensive. Indeed, when the comparatively short life of the ordinary plant stake is taken into consideration, with its first cost, and that of the iron rod is considered, I think the latter the cheapest in the long run, and the greater security afforded the plant by its support must make it a general favorite wherever tried. For large plants have three prongs welded to the bottom of the rod. Turn these prongs out at right angles with the rod, and then give each prong a downward turn, three or four inches from the place of welding. These prongs can be thrust down into the earth in the pot without injuring the roots in the least, as they do not come in contact with the base of the plant from which the roots spread out, as a stake must which is thrust down in the center of the pot. These prongs, standing out from the center, where the rod is, brace against each other, and the plant can be moved without shaking the support loose, as almost always happens when a stake is used. Then, the rod of iron is so small that it is hardly noticeable, while a stake, to be at all secure, must be so large that it has a clumsy look about it, and the appearance of a delicate plant is often quite spoiled by it. If you want a support for a climbing plant, have the blacksmith punch the rod full of holes through which you can

put wire in such a way as to make a rack over which to train the slender branches. The wire will be unseen among the foliage, and the effect is more graceful than when any other support is used. For *Smilax*, *Asparagus tenuissimus*, and other climbers of similar habit, I much prefer wires to strings as a support, except where these plants are grown expressly for cutting from.

R.

THE FRUIT PROSPECT.

At the present time, June 12th, it is too early to perceive with much certainty the prospect of the general fruit crop in this region. It seems probable that there will be a fair crop of Peaches. The Cherry crop will not be more than average, and the same may be said of Plums. The bloom of the Apple trees was very abundant, but it is not safe yet to form an opinion of the amount of fruit that will mature. Apple orchardists throughout the country are slow to take to the process of spraying the trees with Paris green or London purple to save the fruit from the codlin moth, consequently the loss from this source alone will be large; however, enough may escape to produce a good crop. More spraying will be done this season than ever before, and if the same success attends it as heretofore reported, it will grow in favor. On the whole, the outlook for the fruit crop of this region at the present time is good, though causes may yet operate to materially modify this opinion.

CLIANTHUS DAMPIERI.

I have raised a few nice plants of *Clianthus Dampieri* from seed, this spring. I have had no experience with these plants before, and would like to ask you about the transplanting of the same, and do they stand it without injury?

E. A. W., *Hartford, Conn.*

The *Clianthus* is a plant difficult to transplant, and, if possible, it is better to sow the seeds and raise the plants where they are to remain. However, if transplanting must be done it should be attended with the greatest care. The plant does not bloom until the second year. As it is not hardy it must be kept in the greenhouse in our climate. If should be set in a rich bed in the greenhouse and be kept growing thrifly all summer, but in the fall the quantity of water supplied should be decreased to allow the wood to harden and ripen thoroughly. It

should be left to stand during winter where it grew. In February, or by the first of March, it will show signs of starting, and can then be given a little water, and afterwards be cared for as necessary. The latter part of spring it should come into bloom and continue through nearly the whole season, after which its usefulness is ended and it dies.

GRAY AND BLACK SPIDER.

Will the editor of the MAGAZINE kindly tell us if the gray and black, thick-set spider is a friend or foe to cultivated flowers? Lady-bug and grandfather long-legs we accept as friends. The spider referred to above is sometimes an inch across, and exceedingly fond of dwelling in the English Ivy vines out of doors.

READER, *Baltimore, Md.*

The spider mentioned does no particular harm to plants more than the inevitable soiling of the foliage it occasions.

GARDENING AT PIURA, PERU.

As an instance of the difficulties attending gardening in tropical countries, a portion of a letter from one of our subscribers in Peru, South America, is here quoted. It is quite evident that success in gardening under the circumstances described must be attained by methods and plants different from those employed in cool climates. If any reader has had experience in a similar case, and can offer any favorable suggestions that may encourage and assist our correspondent we shall be pleased to publish them.

Some two years ago I laid out a garden or park in one of the public squares of this city, and I have been desirous of introducing some of the flowers from home, which are not common here.

My difficulty now is not in the seeds sprouting, but in preserving them after they appear. As we are but five degrees below the equator, we have a hot climate, though it is tempered by the regular trade-wind from the south, which blows from two o'clock in the afternoon until ten at night. Our position, surrounded as we are by vast sand deserts, makes the heat a very dry one. From observation, the heat in the five hot months, December to April, in the shade, not exposed to the wind, will be 90° to 93° at noon, and fifteen degrees less at night. During the cold season it may be twelve degrees lower.

I generally plant seeds in wine boxes, filled one-half with good earth, and covered by a frame-work, about a yard high, of bagging, to protect it from the direct rays of the sun and prevent the earth from evaporating too rapidly. Notwithstanding these precautions the dryness of the atmosphere makes it necessary to water these boxes daily, an operation which is done at six o'clock in the evening.

I have ordinarily had fair success by these means, but for the last few months have been unable to do anything even with seeds with which I formerly had no difficulty. The seeds sprout readily, but the first time they are watered the stems seem to weaken

and the plant falls and dries up. This has specially been the case with Portulaca and Amaranthus tricolor, which I have sown in different ways, but always with the same bad result.

Amongst the plans adopted, I made small wooden boxes, eight inches square by five inches deep, which were placed in a larger box, leaving a space all around of one inch to be filled with saw-dust and the whole covered with glass, which would prevent the evaporation so injurious to fine seeds, which are hardly covered with earth. These boxes were placed in a spot protected from the sun, and the seeds came up readily, but the plants withered as soon as they sprouted, both those which were retained under shade and those placed in the sun either a part or the whole of the day.

E. C., *Piura, Peru, South America.*

BULBS NOT BLOOMI

I have some Narcissus, Wild Hyacinths and Daffodils, all relics of old homes in this country and in England, and am anxious, therefore, to perpetuate them, but though throwing up plenty of flourishing foliage there is no blossom. The Narcissus I have kept in the open beds, changing their locality and preserving the young bulbs, in the hope of renewing them. The Wild Hyacinths and Daffodils were from an English wood, two years ago. Last year they bloomed freely in the conservatory, but this year there were a few Hyacinths but not one Daffodil. I took the bulbs up last spring, kept them in a dry place and repotted them in the conservatory again this spring, but with the above result. Please tell me, through your MAGAZINE, how to treat them so as to produce bloom.

I have been a subscriber to your MAGAZINE for many years, and feel it not only keeps up its high character, but improves.

C. M. B. S., *Credit, Ont.*

Hyacinths and Narcissus that have once bloomed in pots are not considered of much value afterwards for forcing purposes, and in this case we would advise to make no further trial with them, more than to plant them out and leave them in the garden and take what comes from them in that way.

A COLLECTION OF IRIS.

After the Tulips began to fail, we had a great treat in the blooming of the Iris. The earliest kinds commenced to open their flowers the latter part of May, and from appearances there will be some bloom until the last of June, thus covering the space of a month. The handsomely formed flowers are of a great variety of colors, and a collection of them would be a marked feature in the hardy garden, providing it with a wealth of color before the Rose season comes on. The set of plants now referred to are varieties of Iris Germanica, and for the information of our readers a short description of each variety is given.

The flower stems vary considerably in height, some being quite short, thus bearing the flowers close together, while others are tall, and others still, intermediate. This feature can be taken advantage of in setting a mass of plants on a border, placing the tallest at the back and the dwarf varieties in front, making a sloping bank of bloom.

Agamemnon—Medium; stigmas whitish; petals almost a clear white with slightest clouding of lilac; sepals lavender ground strongly veined with deep maroon; upper half of sepals maroon.

Bacchus—Very tall; flowers large, all the parts white; the stigmas with a purplish stripe along the median line. Petals and sepals margined from a quarter to a half inch in width with veinings of purple, the veins running at right angles to the margin. Free blooming. A peculiar variety of great beauty.

Cæsar—Tall; flower large; stigmas and petals a light lavender; sepals a deep shade of lavender with darker veins.

Canary Bird—Medium; flowers large, all the parts a cream shade, with the base of the sepals veined with brown.

Cherau—Dwarf; flowers medium size; stigmas and petals bronzy yellow; sepals veined with maroon on white ground, superior edge bordered with maroon.

Disraeli—Dwarf; stigmas and petals a clear lemon color; sepals same shade, strongly veined with maroon.

Dr. Blis—Dwarf; stigmas and petals a clear straw color; sepals whitish, veined with maroon. Abundant bloomer.

Edith—Medium; flowers medium; stigmas and petals light lilac; sepals strongly veined with deep purple or maroon on a white ground.

Emma—Medium; flowers quite large; this may almost be called a white Iris. Stigmas, petals and sepals uniform in color—only the slightest tinge of lavender removes it from a clear white; base of sepals veined with bronzy yellow.

Fondel—Dwarf; flowers medium; stigmas and petals bright yellow; sepals, upper half of a rich, velvety brown, lower half brown veins on yellowish ground.

Garrick—Medium; flowers large; stigmas and petals lilac; sepals striped and clouded with deeper shade of lilac.

Goliath—Tall; stigmas white bordered with straw-color; petals white lightly

suffused with lilac; sepals shaded and striated with purple—purple veins at base on white ground.

Hamlet—Tall; stigma and petals a bronzy yellow; sepals heavily veined dark maroon on a whitish ground.

Hotkyk—Medium; form of flower somewhat stiff; stigmas and petals bronzy yellow; sepals same shade heavily veined with reddish purple.

Honorabile—Medium; flowers medium; stigmas and petals a bright yellow; sepals same color veined with brown.

Johan De Wit—Medium; stigmas and petals lilac; sepals veined and shaded with maroon-lilac. Profuse bloomer.

Lady Franklin—Tall; stigmas a bronzy yellow; petals and sepals quite similar, being a whitish ground suffused with lavender and veined on the margin with purplish-lilac. Free bloomer.

Louis Meyer—Medium; stigmas and petals a bronzy yellow; sepals veined with deep purple on yellow ground; upper half of sepal a deep purple and maroon, extreme edge yellow.

L'Unique—Medium; flowers large; stigmas white with purplish stripe along the median line; petals a reddish-lilac; sepals, more than half of the upper part a deeper lilac with darker veins running through a whitish ground at base.

Miralba—Tall; flowers large; stigmas bronzy yellow with lilac stripe along median line; petals bronzy yellow suffused with reddish-lilac; sepals distinctly veined at base with deep reddish-lilac on white ground, the upper part suffused with reddish-lilac. A very distinct variety.

Oldenbarnould—Medium; flowers large, of a nearly uniform pinkish-lilac color in all parts; sepals of darker shade with veinings at base on whitish ground.

Rembrandt—Tall; flowers large; stigmas and petals a clear lilac; sepals darker veined at base on whitish ground.

Rochussen—Dwarf to medium; flowers bronzy yellow with sepals heavily veined with purplish-maroon.

Shakespeare—Medium to tall; stigmas and petals dark bronzy yellow; petals veined and lightly clouded with maroon; sepals with maroon veins on whitish ground, upper half velvety maroon.

Thorbecke—Very tall; flowers well formed; stigmas and petals white; sepals a dark purplish maroon with maroon veins on white ground at base.

OUR YOUNG PEOPLE.

“ANOTHER BANK FAILURE.”

Dr. Clarkson's “light infantry,” as he sometimes called his children, were holding an indignation meeting, one day, when Harry might have been heard, saying :

“How did you find out the bank has failed?”

“When I passed there, just now,” answered Jack, “I saw a large placard on the door, stating that the bank is in the hands of a comptroller, and will not be open to-day. I inquired of a group of men if it would be open to-morrow, and they said, of course, it wouldn't—if ever. And there goes your twenty-five dollars and my fifty, so carefully saved up, and Julia's ten and Emma's seven.”

“Yes, all gone,” exclaimed Julia, “and besides the loss, there's the disappointment of not going to the Great Exposition now, for papa didn't promise to take us all unless we chose to pay part of the expense. And to make it worse, everybody knows we've been expecting to go. Even our teacher was interested, and said it would be as good as a half-year's schooling, if we'd be observing and take notes; and I've got my note book, already.”

“I'd like to know for one thing,” said Harry, “what they called it *savings* bank for—unless they were saving the money for themselves.”

“And named it the *Equity* Savings Bank, too,” added Julia. “Equity means justice, and everything that's right. I should think they'd be ashamed of themselves!”

“The fact is,” resumed Harry, growing more and more indignant, “they just laid a trap for our money and then kept it. If that isn't stealing, I'd like to know what is! And to think that they've got all our five dollar gold pieces, too, that Grandmamma sent us at Christmas. We had better have spent every cent of it and had a good time while it lasted. I'll never save any money again.”

“You'll be a dunce, then,” said Jack, “quit talking such nonsense. But it is

too awfully provoking that all Grandmamma's gold pieces went in there. She didn't save up those shining coins for those fellows to gobble up.”

Then said little Emma, tearfully, “I didn't want to put my gold piece in the bank at all, because I could save it myself as good as any body. But Jack said we'd get c'tifacate for it, and that whenever we returned that we could get our money back again, and you teased me until I had to do it. And now I wish I'd spent it all for candy and eaten it every bit myself.” Here she quite broke down, and bowing her head upon the window seat, cried softly to herself.

Quite unsuspected by these young victims of misplaced trust, their mother had come in from the street, heavy hearted, with the sad news, and sat just beyond the *portière*, a quiet listener to all they had said, thinking the while, of the demoralizing effect upon community of violated public trust, as indicated in a small way by the language and temper of her own children. Knowing her husband to have been a depositor in the same bank in the past, she quietly waited until she saw him pass the window, and going out to meet him was relieved to find her fears groundless.

“You will remember,” he said, “that Mr. Jewell, the cashier, has been my patient for some time past. My suspicions of some irregularity in his business was aroused by random remarks during his delirium. They were disconnected and pointless, but indicated the possession of some torturing secret. So I quietly withdrew what funds I had in the Savings Bank, for reasons that were too indefinite to have been named to a second person, nor would I mention such suspicion, even to you, only that it is publicly confirmed—though even now it must go no further—I should be misunderstood and blamed. Besides, family secrets, you know, must be held sacred by a physician. But had I been so inclined, I could not have impugned Mr. Jewell's honesty

on such uncertain utterances as I heard—not even to have saved my dearest friend from loss. Don't you see, dear, how I stood?"

"Yes, I see it all, and my heart aches sorely for his sweet wife."

"But you don't know the worst, dear. I have just come from his home, having been required to make affidavit before officers (who had come to arrest him), that he is not feigning illness, but is really too sick to be removed to jail."

"O, dreadful! How did that poor woman bear it?"

"I'll tell you. She stood with one hand smoothing her husband's forehead, and with the other hand she clasped one of his. After listening a few moments, she asked, through her set teeth, what it was all about. There was a sickening silence, and then her husband, without looking at her, said:

"I am short in my accounts."

"Still smoothing his forehead, she answered:

"Well, we must both be brave. Only cowards refuse to face their misfortunes, howsoever brought about. Any evasion of trouble, such as we often hear of now-a-days, only adds ten-fold to the distress of those left behind. I shall stand by you. Don't worry too much, but try to get well. And when this trouble is over, we'll begin again and have everything different—everything different—and better—and happier," she slowly continued.

"I can see her yet, as she stood there with glistening eyes, a burning spot on each cheek, and with features forced into placidity, while her agonized heart, I knew, was suffering keenest torture. I fear her already overtaxed strength will fail her under this added burden."

"A burden, compared to which all else was nothing. How does her feeble old father bear it—or does he know?"

"I think he knows. I saw him as I came away, with his head bowed over the youngest boy, whom he held in his lap. He must have met the officers."

"How sad that, after his long life of rectitude, his last years must be blighted by a disgrace like this. O, the trouble, trouble that men can bring upon those whom they ought to protect and make happy! What do these oft-repeated cases of fraud, of embezzlement, of robbery outright, signify? Must we con-

clude that the parents of these criminals have been remiss in duty to their children?—that the mothers have been too careless, or too busy, to properly train their boys? Where are my children, this moment?—and passing into an adjoining room, she cried:

"Children, children, come here! I know your trouble about the bank. Come close to me, boys. Have I not taught you that a penny wrongfully gained should burn worse than fire in your pockets—that dishonest money is deadly poison to your morals—that ill-gotten gains should feel like blisters to your fingers—that its sight should sear your very vision? And against fraud and trickery of every kind, have I not warned you—and against bribery, too—telling you of the man who scorned the offer of a cigar wrapped in a hundred dollar bill as a wordless bribe, and which won for the giver only contempt? Boys, boys! have I not taught you and warned you, over and over again, about all these things? Speak!"

"Yes, yes, mother, you have—we remember it all," the brothers anxiously cried. "We haven't been doing anything wrong—what is the matter with you?"

"What is the matter with the mothers of this land, that they don't teach their children clean, clear-cut honesty, teach them while young to despise trickery, double-dealing and deception amongst themselves in their plays and games, and in their intercourse at school—teach them that there is a higher life to strive for, a vast and 'beautiful beyond'."

"I'll tell you, children, what has stirred me so. It is the coming so close to us of a case of monstrous dishonesty. You all know the lovely Mrs. Jewell—well, if her husband were not too ill to leave his bed he would now be in jail for his dishonest appropriation of the Savings Bank funds. It is no secret—it will all be in the evening papers. You need not wonder, now, that I am excited."

A cry of genuine dismay broke from the startled children. Even Jack turned pallid and looked positively frightened. Neither one mentioned the loss of money again that day.

The following morning, when Dr. Clarkson had concluded his visit to his unfortunate patient, Mrs. Jewell's father called him into his own room for counsel.

"Doctor," said he, "I want your help; and to make you understand the emergency, I must impart to you a bit of my past transactions. Feeling that many men make a mistake in leaving the bulk of their wealth to be distributed to their families after death, I have given the greater portion of mine to my children as they came to be settled in homes of their own, or in business,—repressing a constant desire to give largely to churches and charities. To partly atone for this omission, I took out a life policy, payable at eighty years of age, and so written that if death should ensue before that period the money could not, by any legal process, be appropriated otherwise than therein directed; though my family do not know of its existence.

"In eleven months this policy will mature, and since this trouble has come upon us, Doctor, I am seized by a desire to live until that period, that I may use a portion of that money to secure my daughter and her little ones from poverty; for her own means, and her home must be turned in to increase the dividends, which will be but scanty indemnity for outright losses, at best. She will do all in her power to retrieve the honor of the father of her children, and I must help her. I am not sick, Doctor, but am becoming rapidly enfeebled, as you see, from weakened digestion and from imperfect assimilation, I suppose—conditions which I have hitherto cheerfully accepted as the result of failing nature common to old age. Now, however, I would like nature assisted in the most intelligent way possible."

Dr. Clarkson was deeply touched, and quickly answered: "Your brain, fortunately, does not share the general debility, therefore, I see no reason why you should not be good for another decade of years. The weakness induced by imperfect digestion *reacts* upon the digestive organs, thus rapidly increasing the trouble. By using a nutrient that is almost self-digesting you will doubtless soon be walking our streets with much of the firmness of the old time tread."

And so it really proved.

But we must return to Mr. Jewell. An outraged community would not rest until it was known that he was safely lodged in jail. Immediately after that event his wife was stricken down by nervous pros-

tration, as though by a blow, and her faithful father becoming her chief nurse and attendant through many long weeks of tardy recovery.

The Doctor still visited his convalescing patient in "durance vile," and on one occasion persuaded his reluctant boys to accompany him. The criminal seemed interested in their fresh, honest young faces, and inclined to talk with them.

"I suppose," said he, "that you don't hate me as bitterly as do those who lost money in the bank."

Harry looked at Jack, and Jack looked at his father, who avoided looking at either.

"I think we and our sisters have lost our share. Our certificates of deposit call for ninety-two dollars."

"You don't say so! Doctor, why didn't you tell me? I already knew that your own money is safe. Ah, this hurts worse than some of the larger losses." Then he fell into a gloomy mood, after which, he said:

"Boys, it's bad enough to speculate with your own money, but never do it with other people's money—never, *never*. I've tried lately to recall the very first wrong act of boyhood which led directly into the loose habits of conduct which finally brought me here, and I'll tell you what it was. I used to play truant from school, and when I couldn't get written excuses for absence, I copied one written by my mother, and which I had retained for the purpose; and, boys, that was *forgery*. But I didn't know it then. Yes, it was forgery. A bad beginning. I wish all the boys in the land could realize how rapidly bad habits grow upon one."

"Must you go, Doctor? Well, then, good-bye; boys, good-bye," and soon this man, so lately honored and respected, was left alone with his remorseful thoughts.

MARIA BARRETT BUTLER.

[NOTE.—For the cheer and comfort of those whom it may concern, the writer desires to say that the restoration to comparative strength to the aged man in her story is no fabrication, but a verity. Delicate children, as well as adults, may be tided over critical periods of illness or debility by using the same nutrient, even when there seems to be an entire suspension of the digestive process. This statement, too, can be verified. Various "food extracts," good of their kind, have been tested, but the one here referred to is Reed & Carnick's Beef Peptonoids, 182 Fulton Street, New York City. In view of the writer's published protests, in the past, against the use of charlatan compounds, our true-hearted editor kindly allows her thus to express her approval of a really life-saving preparation.—M. B. B.]



CURIOUS MOTHS.

CURIOS MOTHS.

Most curious of all moths are those called the "Death's Head," or Morta. They are wonderful because of their great size, but still more so from the strange mark upon their bodies, which closely resembles the human skull, and thus gives them their name. They are found in Europe, Asia and Africa, and are looked upon by the superstitious with dread and fear, for their appearance in any place was supposed to be an omen of ill, the idea being that if, when flying, the dust from their wings should fall on any one, they would surely be smitten with blindness. They are of a gray, tan and black color, of very large size, measuring seven inches across, from tip to tip of the wings, which are strong as well as large, giving them the means of powerful flight. The bodies, like those of all moths, are large, thus giving space for the peculiar skull-like mark, which is quite distinct.

Another peculiar moth is the Patroclus. This also is very large, though the breadth is not so great from the tips of the wings as in the case of the Morta. The insect is tan colored, mottled with darker tan, and one of its peculiarities is in the formation of the back wings, which are so extended as to form on each a long, queerly-shaped appendage.

Thus from the tip of the front wing to the extreme point of the tail on the back wing, the length is over seven inches.

Therefore, some idea of the enormous size of these insects may be gained from the measures given. Although larger than many of the moths, they are not so beautiful in coloring, as for instance, the Cecropia, which is also large and of rich coloring, as deep red, with black and white markings.

There is also a very beautiful insect called the Lunar moth, which has the peculiar lengthening of the back wings, though not to so great an extent as the one described.

The Humming-Bird Moth is another strange insect, but of smaller size than those which have been mentioned. It is given the name of Humming-Bird moth because of the same sound it makes when flying as the Humming bird does. It is not of so great a size as many, for the wings are shorter and narrower, and the bodies are not so large.

It is wonderful to consider the varieties in the size, color and shapes of moths, and contrast the many kinds and their various habits, from the tiny night-moths, which fly about the house, to those of mammoth size, which have just been described.

M. E. B.

EDITOR'S MISCELLANY.

THE SEVENTEEN-YEAR LOCUST.

The United States Department of Agriculture has sent out from the Division of Entomology a circular requesting information in regard to the appearance of the Seventeen-year Locust wherever seen; and any of our readers who may notice them will do a service to science to write to the Department, informing them of the fact. The following is the circular:

WASHINGTON, D. C., May, 1888.

During the present year two broods of the Periodical Cicada, or so-called Seventeen-year Locust (*Cicada septendecim*, L.), one of the seventeen-year race (*septendecim*) and one of the Thirteen-year (*tredecim*) race will make their appearance in different parts of the country.

I would beg of you to glance over the following list of localities and to send me during the season any confirmatory experience as to the appearance this year of the insects in these localities, or in any localities not indicated. Any evidence giving the extent of territory over which they appear in your State or County, or any well attested dates of their appearance in previous years, will be thankfully received and appreciated.

Brood V.—*Septendecim*—(1854, 1871, 1888.)

Wisconsin—Waukesha, Jefferson, Rock, Green, Dane (?), Iowa, Grant, Crawford, Richmond, Sauk Counties.

Iowa—Mitchell, Howard, Winneshiek, Allamakee, Clayton, Fayette, Chickasaw, Floyd, Bremer, Butler (?), Dubuque, Delaware, Buchanan, Black Hawk, Jackson, Jones, Linn, Benton, Clinton, Scott, Cedar, Johnson, Muscatine, Louisa and Des Moines Counties.

Illinois—All of the northeastern Counties. The boundary line, in a general way, may be drawn from the northwest portion of Mercer County, southeast to the Illinois River at Peoria, west along the Toledo, Wabash and Western Railroad. There seems to be detachments extending further south, especially in the eastern portion of the State, and they occur as far south as Shelby County.

Indiana—The boundary in this State is not well defined, but includes the extreme northwest counties, extending as far south as the Kankakee River.

Michigan—In this State the southern tier of counties extending from Lake Michigan east to the middle of the State.

Pennsylvania—Lancaster County—The southeast by

eastern portion, known as the "Pequea Valley." This locality was not verified in 1871, although there is no doubt of the appearance of the insect in immense numbers in 1854.

Brood X.—*Tredecim*—(1849, 1862, 1875, 1888.)

Texas—I am particularly desirous of verifying this brood. Its existence now rests on the single statement of Dr Gideon Smith that he was informed that the insects appeared in vast numbers in parts of Texas in 1849, but that he was not able to get any particulars. 1875 did not furnish any information concerning this brood; hence my desire for full and accurate returns from Texas this year.

C. V. RILEY, Entomologist.

INTERNATIONAL FAIR.

An International Industrial Fair, which will be an exhibition of the arts, industries and leading interests of the United States and Canada, will be held in Buffalo, from the 4th to the 14th of next September.

The promoters of the exhibition say that cash premiums to the amount of \$100,000 will be offered.

The main building will be larger than any other fair building in the world.

The cash premiums will be the largest ever offered by any fair in the world. Premiums will be on all kinds of live stock, including poultry, pigeons and blooded dogs.

Exhibits from nearly every Province in the Dominion of Canada will be shown, and many valuable European exhibits are already assured. The Canadian exhibits will be the largest ever shown in America.

The art gallery will contain several of the most celebrated paintings in the world. In the machinery and horticultural halls, and in the agricultural and industrial departments, will be shown the greatest inventions and devices and the most wonderful natural and industrial products of this marvelous day of civilization.

Provisions will be made to accommodate eight hundred horses and the same number of cattle, besides sheep, swine and poultry. There will also be a bench show of dogs, at which will be exhibited representatives from the most famous kennels in the country.

ALL KNOWN FERNS.

This is the title of a work now in process of preparation by Dr L. G. Yates, of Santa Barbara, California, assisted by J. B. Baker, F. R. S., F. L. S., of the Kew Herbarium, near London, England. Dr. Yates is a well known authority on the subject of which he treats, and Dr. Baker is one of the highest English authorities, and coming from them conjointly it could have no better source. It will be a complete index to Fern literature, containing information of the habitats of all known species of Ferns, with synonyms &c., carefully arranged. Dr. Yates informs us that it will contain a synopsis of the genera and sub-genera of Ferns. All students and collectors of Ferns will appreciate the value of this work, for they personally feel the need of it, comprising, as it will, a systematic arrangement of all the genera and species, and containing more than six hundred species lately discovered, and not to be found in any existing work on the subject. The volume will be handsomely bound in cloth, and consist of three hundred or more pages. Botanists, fern collectors, and all interested should be possessed of this volume. The price of the book is not to exceed \$2.50. Copies interleaved for notes and additions, \$3.00.

THE NEW STATES OF THE WEST.

The great harm done to the west by land laws is a familiar subject to the eastern newspaper reader, and it is the common opinion in the east that these statutes ought all to be wiped from the books. Yet the west has been settled under their operation; and how well settled, too, is shown by Frank H. Spearman in an article in *Harper's Magazine* for July, sarcastically entitled "The Great American Desert" which no longer exists, of course, except in old-fashioned school geographies. Kansas and Nebraska, long regarded as the dreariest spots in this dreary waste, are the especial topics upon which Mr. Spearman enlarges. He does not claim that they are Paradise, but simply that they are wonderfully fertile and promising States, and that their careers have only begun. Aside from its value in demolishing old-fashioned, popular ignorance, this article offers much information to eastern people who ought to want to better their condition. It also abounds in fine illustrations, some of them full-page in size, representing the country, the people, and their homes. An excellent map adds to the value of this contribution.

OHIO AGRICULTURAL EXPERIMENT STATION.

The Ohio Agricultural Experiment Station has issued its first bulletin, as reorganized under the Act of Congress, known as the Hatch law. This bulletin briefly sketches the history of the Station since its first organization, and gives an outline of the plan of work upon which it is proposed to enter. The object and purpose of the Station is to carry on such investigations upon the management of the soil, the varieties and culture of field crops, fruits and garden vegetables, and the breeding, feeding and general management of live stock as may be made practically available by the farmer in the conduct of his business. Ohio farmers are invited to apply for the bulletins of the Station, which will be sent without charge. All communications should be addressed, Experiment Station, Columbus, Ohio.

WOMEN'S CLUBS.

The July number of *The Women's World* will contain among other interesting papers, one by Amy Levy, on the Women's Clubs of London. London is much ahead of New York in this matter, and has at least five flourishing and well housed clubs for women. The most fashionable of these is the "Alexandra," the most literary or Bohemian, the "University."

BERKS COUNTY (PA.) AGRICULTURAL SOCIETY.

This flourishing society will hold no exhibition this year for the reason that it is deprived of the use of its old grounds. New grounds have been purchased which it is the intention of the society to equip in the most thorough manner, and be ready to hold an exhibition next year. Cyrus T. Fox, the Secretary of the Society, through whom this information has been received, also states that the Society's monthly meetings and discussions will be continued.

JULY SCRIBNER'S.

Parts of the battle ode which George Parsons Lathrop will read before the Army of the Potomac at Gettysburg, on July 3d, the twenty-fifth anniversary of the event, will be published in *Scribner's* for July.

CHAUTAUQUA HORTICULTURAL SOCIETY.

A brief report of the first summer meeting of this Society, held at North East, Pa., June 23d, is expected for the August issue.